S T A T E   O F   M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

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In the matter of the application of **DTE ELECTRIC COMPANY** for authority to increase its rates, amend its rate schedules and rules governing the distribution and supply of electric energy, and for miscellaneous accounting authority.	)))))))	Case No. U-20836

At the November 18, 2022 meeting of the Michigan Public Service Commission in Lansing, Michigan.

PRESENT: Hon. Tremaine L. Phillips, Commissioner
Hon. Katherine L. Peretick, Commissioner

ORDER

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I. HISTORY OF PROCEEDINGS

On January 21, 2022, DTE Electric Company (DTE Electric) filed an application requesting authority to increase its retail rates by approximately $388 million,[1] effective as early as November 21, 2022.[2] DTE Electric also requested other forms of regulatory relief, including amending its rate schedules and rules governing the distribution and supply of electric energy and the approval of several pilots and various accounting proposals. The utility is currently providing service pursuant to rates established by the May 8, 2020 order in Case No. U-20561 (May 8 order) and various special contracts.

According to DTE Electric, the rate increase sought in this case is based on the utility's projections from relevant items of investment, expense, and revenue for a test year covering the 12-month period from November 1, 2022 through October 31, 2023. DTE Electric explained that the starting point for determining its revenue deficiency was the historical data from year-end 2020, which was then normalized and adjusted for known and measurable changes to arrive at the utility's projected test year.

In its application, DTE Electric stated that the rate increase was necessary to recover increased investments in plant, a category involving generation and the electric distribution system and

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[1] In its reply brief, DTE Electric supported a revised revenue deficiency of $367.9 million. DTE Electric's reply brief, pp. 2-3, Attachments A and B. In exceptions and replies to exceptions, however, DTE Electric supported a revised revenue deficiency of approximately $367.2 million. DTE Electric's exceptions, pp. 6-7, 237; DTE Electric's replies to exceptions, pp. 7, 109.

[2] The application also mentioned new rates being effective as early as November 10, 2022; however, the rate case summary filed before the application also included an effective date of November 21, 2022, which accords with the full 10-month statutory timeframe following the date of application pursuant to MCL 460.6a(5), along with ratemaking principles. An effective date as early as November 21, 2022, was also supported by the utility in its reply brief, exceptions, and replies to exceptions. DTE Electric's reply brief, p. 197; DTE Electric's exceptions, p. 238; DTE Electric's replies to exceptions, p. 110.

associated depreciation and property tax increases, offset by lower operations and maintenance (O&M) expenses, in order for the utility to continue to provide safe and reliable electric service to meet customers' quality expectations and to allow the utility a reasonable opportunity to recover its costs of operation, including a reasonable rate of return (ROR). DTE Electric proposed a return on equity (ROE) of 10.25% with an overall ROR of 5.56% after tax, 6.98% pre-tax. The utility also requested a permanent capital structure of approximately 50% equity and 50% long-term debt and included a projected average rate base of approximately $21.3 billion for the test year.[3]

On February 18, 2022, Administrative Law Judge Sharon L. Feldman (ALJ) conducted a prehearing conference at which the ALJ granted petitions to intervene filed by the Michigan Department of Attorney General (Attorney General); Energy Michigan; Michigan Energy Innovation Business Council and Institute for Energy Innovation (collectively, EIBC/IEI); ChargePoint, Inc. (ChargePoint); Bloom Energy Corporation (Bloom Energy); Michigan Environmental Council, Natural Resources Defense Council, Inc., Sierra Club, and Citizens Utility Board of Michigan (collectively, MNSC); Michigan Cable Telecommunications Association, Inc.; Association of Businesses Advocating Tariff Equity (ABATE); The Kroger Co. (Kroger); Gerdau MacSteel, Inc. (Gerdau); Local 223, Utility Workers Union of America, AFL-CIO (Local 223); Environmental Law and Policy Center of the Midwest,[4] Ecology Center, Inc., and Vote Solar (collectively, the Clean Energy Organizations or the CEOs); Michigan Municipal Association for

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[3] During briefing, the company supported a rate base projection of $21.243 billion for the test year. DTE Electric's initial brief, Attachment A, p. 1; DTE Electric's reply brief, Attachment A, p. 1. In exceptions, the company supported a rate base projection of $21.235 billion for the test year. DTE Electric's exceptions, Attachment A, p. 1. The company's requested ROE, ROR, and capital structure, however, remained the same throughout the entire case.

[4] Although typically referred to as the Environmental Law & Policy Center, or ELPC, the entity's true name per the Office of the Illinois Secretary of State is the Environmental Law and Policy Center of the Midwest.

Utility Issues (MI-MAUI); City of Ann Arbor (Ann Arbor); Walmart Inc. (Walmart); Great Lakes Renewable Energy Association, Inc. (GLREA); Residential Customer Group; Soulardarity and We Want Green, Too (collectively, the Detroit Area Advocacy Organizations or the DAAOs); Zeco Systems, Inc. (Zeco); and EVgo Services LLC (EVgo). DTE Electric and the Commission Staff (Staff) also participated in the proceeding. A schedule for the case was also established by the ALJ in accordance with the 10-month timeframe set forth in MCL 460.6a(5).

On February 24, 2022, the ALJ granted International Transmission Company's (ITC's) petition to intervene late.

On March 1, 2022, the ALJ adopted a protective order for use in the matter.

Evidentiary hearings were held on June 29 and 30 and July 1, 5, and 7, 2022, wherein testimony and exhibits were bound into the record and cross-examination took place. Thereafter, the parties filed timely briefs.

On August 22, 2022, the Commission held an in-person public hearing in Detroit for the sole purpose of hearing comments directly from the public on this case.

The ALJ issued a Proposal for Decision (PFD) on September 19, 2022. On October 5, 2022, MNSC, MI-MAUI/Ann Arbor, GLREA, the Staff, Kroger, the Attorney General, ABATE, Energy Michigan, ChargePoint, EIBC/IEI, Bloom Energy, EVgo, the CEOs, DTE Electric, and the DAAOs filed exceptions. On October 17, 2022, MI-MAUI/Ann Arbor, Energy Michigan, EIBC/IEI, ChargePoint, Gerdau, GLREA, ABATE, EVgo, the Staff, the CEOs, DTE Electric, MNSC, the DAAOs, and the Attorney General filed replies to exceptions.

The record consists of testimony from 104 witnesses contained within 5,696 pages of transcript, along with 776 exhibits, several of which also have a confidential version.[5]

II. LEGAL STANDARDS

DTE Electric discussed legal standards, including the Commission's jurisdiction over this case, the applicable standard of review, and rate setting legal requirements. DTE Electric's initial brief, pp. 8-15; *see also*, DTE Electric's reply brief, pp. 3-8 (citing Attorney General's initial brief, p. 11, and ABATE's initial brief, pp. 1, 6, and responding with constitutional protections and other legal arguments surrounding the utility's past earnings, new or expanded programs without acknowledged necessary funding, and social policy changes to shift costs).

The ALJ summarized the legal standards applicable to rate cases and, in concluding this section of the PFD, found that, "in the absence of any issue rising to the level of a constitutional concern, this [ALJ] looks to past Commission decisions addressing various rate case elements for guidance in determining how to resolve disputes among the parties." PFD, p. 45.

DTE Electric disagrees with the ALJ's suggestion that there is no issue rising to the level of a constitutional concern in this case, "maintain[ing] all of its constitutional rights that are presently involved or that might otherwise arise depending on how the Commission decides certain issues." DTE Electric's exceptions, p. 2. Per the company, it thus "properly preserves constitutional issues" while recognizing that the Commission, as an agency exercising quasi-judicial power, "'does not undertake the determination of constitutional questions or possess the power to hold statutes unconstitutional.'" *Id*. (citing *Wikman v City of Novi*, 413 Mich 617, 646-647; 322 NW2d 103 (1982); *City of Taylor v Detroit Edison Co*, 475 Mich 109, 122; 715 NW2d 28

[5] The docket also contains a large number of public comments, including those transcribed from the in-person public hearing held on August 22, 2022.

(2006)). The company then reiterates its constitutional protections and applicable law, along with legal standards relevant to this post-PFD stage of the case, and objects to the PFD to the extent the ALJ suggests that "the Company's requests for relief should be denied unless the Company overcomes some unstated (and unlawful) initial hurdle of evidentiary weight or other adverse presumption," noting evidentiary and burden of proof standards set forth by statute and case law. DTE Electric's exceptions, p. 4. As a final collective general exception on this topic, DTE Electric generally notes that the ALJ's discussion in the PFD, here and elsewhere in a PFD that is unprecedented in length, exceeds what is strictly necessary and maintains that MCL 460.6a(1) and other statutes must be applied as written and controlling precedent followed. *Id*., p. 6. DTE Electric later discusses these matters further in the context of specific contested issues below.

MNSC responds and asserts that: (1) DTE Electric's arguments concerning the applicable legal standards fail to meet the requirements for an exception, (2) the company's constitutional arguments are without merit, (3) the company incorrectly attempts to shift the burden of proof onto the Staff and intervenors in this case, (4) the ALJ took on a massive effort to fulfill the legal requirements in this case in light of its scale and complexity, and (5) the Commission should reject DTE Electric's criticisms of the PFD as too long and detailed. MNSC's replies to exceptions, pp. 1-8.

DTE Electric also responds to this in replies to exceptions and objects that some parties' arguments in exceptions are not proper exceptions or are otherwise contrary to controlling law. DTE Electric's replies to exceptions, pp. 2-6. With this objection, DTE Electric further addresses applicable law, including that relevant to this stage of the case.

Also responding, the Attorney General begins by agreeing with the discussion in the PFD on the standards that govern this case and highlights that DTE Electric alone bears the burden to fully support the reasonableness and prudence of each of the company's requests in this case. Attorney General's replies to exceptions, p. 1. The Attorney General further argues that exceptions "are not intended to be an opportunity to rehash a party's entire case;" however, DTE Electric "spends the vast majority of its exceptions repackaging, summarizing, or simply rewriting its direct and rebuttal testimony, as well as the testimony of the other parties," which the Attorney General asserts is inappropriate, overly voluminous, and unnecessary. *Id*., p. 2. The Attorney General disagrees with the company's exceptions on legal standards and supports the ALJ's findings and discussion in this specific section of the PFD, expressing her appreciation for the ALJ's time and diligence and contending that the ALJ did a good job of presenting the proper standards of review and framework for rate cases. The Attorney General further asserts that the company's exceptions on this topic "appear[ ] to be mainly an attempt by the Company to 'muddy the waters' by presenting varied and disjointed arguments that the PFD is incorrect, off-base, and/or attempts to hold the Company to inappropriate standards;" that the company's exceptions, as often done before, "misleadingly cite[ ] to the standard for appellate review of a Commission's decision ('competent, material, and substantial evidence on the whole record'), which is clearly not relevant at this stage of the proceeding;" that, again, "the burden to support every facet of its filing and projections is on DTE [Electric];" and that the PFD is unprecedented in length because "DTE [Electric]'s rate case filing and request is unprecedented in length and number of topics, which inherently leads to a longer PFD" that involves "intricate, weighty issues that the parties and ALJ must examine" and that "understandably takes some additional pages" to address. *Id*., pp. 3-5. The Attorney General argues that the Commission "should reject DTE [Electric]'s attempts to shift the burden of persuasion onto other parties and to obscure the discussion of proper legal standards with inapplicable due process and constitutional takings claims" and provides this reply "as an example of the distraction and erroneous argument that DTE [Electric] presents parties with throughout this case"—an argument that the Attorney General contends "is unhelpful, wastes time, and decreases the ability of parties to fully examine other issues." *Id*., p. 5.

The Commission finds that its final decision in this case is based on a proper application of law and weighting of evidence in the record, represents the appropriate balance between customer and shareholder interests in the ratemaking process of fixing just and reasonable rates, and ensures that the utility has the opportunity to earn a reasonable return of and on its investments in this matter. *See*, *Bluefield Waterworks Improvement Co v Pub Serv Comm of West Virginia*, 262 US 679, 690-694; 43 S Ct 675; 67 L Ed 1176 (1923); *Fed Power Comm v Hope Natural Gas Co*, 320 US 591, 603; 64 S Ct 281; 88 L Ed 333 (1944); *Michigan Bell Tel Co v Mich Pub Serv Comm*, 332 Mich 7, 38; 50 NW2d 826 (1952).

III. TEST YEAR

In developing its rates for this case, DTE Electric relied on a projected test year from November 1, 2022 through October 31, 2023, explaining that it normalized and adjusted actual results from the 2020 historical year in determining test year amounts. DTE Electric's initial brief, p. 15. ABATE argued that the Commission should be significantly vigilant in its reasonableness and prudence review of cost projections and should institute an earnings sharing mechanism (ESM) to curtail unnecessary overearning, given the utility's consistent use of inaccurate projected test years to collect excessive revenue. ABATE further asserted that the Commission should reconvene a collaborative workgroup as soon as practical to discuss and examine the experience and impact of the current rate case filing requirements established by the July 31, 2017 order in Case No. U-18238, including the utilities' use of projected test years and ROE requests that continue to result in excess revenue collection under the current minimum filing requirements.

ABATE's initial brief, pp. 2-9. DTE Electric disagreed with ABATE, asserting that its projected test year meets the plain statutory language of MCL 460.6a(1), that projected test years have been affirmed in every appeal, that it supported its projected costs in this case, and that the use of projected test years has already been used as a well-established factor to reduce ROEs. DTE Electric's reply brief, pp. 8-10. The Staff also replied, arguing that DTE Electric misconstrues the basis of its test year, misinterprets MCL 460.6a(1), and mistakenly claims that its projected costs can be verified. Staff's reply brief, pp. 27-29.

The ALJ agreed that it is reasonable to use a projected test year that follows the expected date of a Commission order in this case but noted that the Commission has made clear that it is not required to include projections that are found to be unsupported or if it believes there is a material likelihood that the money will not be spent as projected. PFD, p. 51. DTE Electric's claims that it supported its projections were then evaluated by the ALJ thereafter in the PFD, along with ABATE's recommended ESM.

No exceptions were filed on this issue.

The Commission agrees with the ALJ and approves the company's projected test year from November 1, 2022 through October 31, 2023. As the Commission has previously stated, "the burden is on the company to prove the accuracy of each and every test year projection." December 22, 2021 order in Case No. U-20963 (December 22 order), p. 10. These projections are discussed starting below, along with ABATE's recommendations regarding an ESM and the current rate case filing requirements, the latter of which are discussed together and in similar order as how they were addressed in the PFD, towards the end of this order.

IV. RATE BASE

Rate base consists of the capital invested in utility plant, less accumulated depreciation, plus the utility's working capital requirements. In this case, rate base also includes net capital lease property and net nuclear fuel property, less capital lease obligations. By the briefing stage of this case, DTE Electric projected a jurisdictional rate base of $21,242,782,000 for the test year,[6] and the Staff calculated a jurisdictional rate base of $20,622,747,000 for the test year. DTE Electric's reply brief, Attachment A, p. 1, line 1, column (d); Staff's reply brief, Appendix A, line 1, column (e). The Attorney General recommended a $679.9 million reduction to rate base, and ABATE recommended an $825.8 million reduction. Attorney General's initial brief, p. 79; Exhibits AG-1.26, line 27, column (g), and AG-1.51, line 1, column (c); ABATE's initial brief, p. 38; 8 Tr 3020-3021. Other parties also addressed individual rate base items.

Contested rate base issues are addressed *ad seriatim*, following an overall general discussion about pilot project proposals submitted in this case.[7]

A. Pilot Project Proposals in General

DTE Electric proposed 17 pilot projects in this case—four addressed here in rate base and the remaining addressed below under Part VIII (Other Revenue-Related Items)—with the majority of these being new proposals with significant funding requests attached. While a general rate case is certainly an avenue where such proposals can be submitted for review and approval, the

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[6] Again, in exceptions, DTE Electric supports a jurisdictional rate base of $21.235 billion for the test year. DTE Electric's exceptions, p. 8.

[7] This order follows, as much as possible, the headings contained in the PFD. Thus, in Rate Base, the affected Schedule and line items are listed in each subheading (as in the PFD) and all refer to Exhibit A-12. The figures appearing in the first sentence of the discussion of the topic are derived from the listed Schedule and line item.

Commission expresses its concern that general rate cases continue to grow substantially in length and complexity year after year, including the current case which involved the largest PFD issued to date (at 729 pages). This trend, particularly when juxtaposed against a statutory 10-month deadline for issuing a final decision under MCL 460.6a(5), strains the ability for meaningful review by all involved in a general rate case and for the Commission to fully evaluate the merits of proposed pilot projects. As such, the Commission strongly encourages DTE Electric, moving forward, to reach out to and work with stakeholders in advance of pilot filings and consider submitting its pilot project proposals outside of the general rate case process, where feasible and appropriate, and to accompany with such filings a request for deferred accounting treatment for costs associated with these pilots. While this alternative route would still necessitate funding requests for the same to be later reviewed and approved in a future general rate case, this alternative path would allow for the structure and other programmatic elements of these pilot project proposals to be separately vetted in a more flexible forum that could then be addressed via *ex parte* review and approval if appropriate and the case meets the requirements of MCL 460.6a(3). The Commission would, of course, have the discretion to convert any case into a contested matter if it deems fit to do so. On this topic, the Commission also notes that additional guidance will soon be forthcoming on the Staff's proposed Expedited Pilot Review for Innovative Pilots in Case No. U-20898.

B. Production Plant (Non-Nuclear)

1. Steam Plant—Non-Routine Additions (B5.1, Page 2, Lines 1-9)

a. Belle River Gas Conversion Study (B5.1, page 2, line 2)[8]

DTE Electric included projected expenditures of $2.474 million in the bridge period[9] and test year "to perform the engineering required to complete a detailed estimate of the performance, cost, and timeline required to convert the [Belle River Power Plant]'s fuel source from coal to natural gas," a fuel conversion which the utility stated is feasible and would be minor, low-cost, and an expeditious means to address resource adequacy and reliability. 5 Tr 651. ABATE and MNSC objected, arguing that expenditures for this project should be disallowed as premature given uncertainties surrounding Belle River—uncertainties likely to be evaluated in the utility's upcoming integrated resource plan (IRP).[10] 8 Tr 3026, 4066-4069; Exhibits MEC-73 Corrected, MEC-111, AB-10. DTE Electric rebutted, pointing to evidence that the preliminary engineering work for this project is to be completed in 2022 to support the utility's 2022 IRP filing and that the work for this project is to determine whether Belle River should be converted, not to do the engineering to actually convert the power plant to natural gas. 5 Tr 744, 752; DTE Electric's initial brief, pp. 29, 35. In briefing, ABATE and MNSC maintained their disallowance recommendations. ABATE's initial brief, pp. 41-42; MNSC's initial brief, pp. 26-29. The Staff

[8] The Commission notes that in Exhibit A-12, Schedule B5.1, this project is titled Belle River Fuel Conversion Engineering.

[9] The bridge period in this case, connecting the historical year to the projected test year, spans from January 1, 2021 through October 31, 2022. In this order, similar to the PFD, this bridge period may also be referred to as the 22-month bridge period and with references to the 10-month bridge period corresponding to the 10 months in 2022 (i.e., January 1, 2022 through October 31, 2022).

[10] DTE Electric has since filed its IRP. *See*, Case No. U-21193.

recommended that the projected expenditures be approved as necessary and reasonable and prudent to determine Belle River's future in the utility's upcoming IRP. Staff's reply brief, pp. 2-4.

The ALJ agreed with ABATE and MNSC and found the company's funding request to be premature in light of the excessive scope of the project set forth in evidence, which she found exceeded the narrow engineering analysis needed to determine if Belle River should be converted. PFD, pp. 69-70 (referencing Exhibits AB-10, p. 18, and MEC-111, pp. 2, 3).

DTE Electric disagrees and argues that the ALJ "unreasonably demands more evidence where straightforward logic provides the correct answer." DTE Electric's exceptions, p. 11.[11] DTE Electric asserts that "ABATE's postulated uncertainty is unfounded" and references evidence in support to show that this work is to be completed in 2022 to support the company's 2022 IRP filing. *Id*. (referencing Exhibit AB-10, p. 16; Exhibit A-40, Schedules EE5, EE6, EE7; 5 Tr 744). DTE Electric argues similar error with the ALJ's reliance on MNSC's argument which was based on a misunderstanding of the project being for engineering to convert the plant to natural gas whereas, "[i]nstead, the project is to provide the information necessary to decide whether the plant should be converted to natural gas." DTE Electric's exceptions, p. 12. The company continues:

> The [ALJ]'s suggestion that DTE Electric should have provided some additional economic analysis regarding operating Belle River as a gas-fueled plant is unreasonable and illogical because it would "put the cart before the horse." This engineering study is appropriate and timely to determine the scope, schedule, and potential cost of a potential plant conversion. This information will form important inputs to the Company's upcoming IRP, and the Commission should not be deprived of that information as the [ALJ] effectively suggests. Furthermore, it is

[11] DTE Electric earlier notes in exceptions that it "found numerous inconsistencies between the amounts identified in the PFD Appendices and the recommendations made in the narrative PFD," wherein "[i]n some instances with respect to individual expenses, the [ALJ's] recommendation is simply not quantifiable." DTE Electric's exceptions, p. 7. Here, with respect to expenditures for the Belle River gas conversion study, is one such example of where the company notes that "[t]he PFD narrative is inconsistent with Appendix E." *Id*., p. 11, n. 17.

> beyond reasonable debate that converting the fuel source for an existing 1,300 MW [megawatt] power plant would involve a fraction of the cost of building a whole new 1300 MW power plant, so studying the feasibility of doing so is a logical, reasonable and prudent endeavor that will benefit the Company's customers.

Id. Per DTE Electric, its requested cost recovery here should be approved.

ABATE responds and argues that, although the company asserts that ABATE's uncertainty claims are unfounded, these assertions do not establish that cost recovery is reasonable or prudent at this time. ABATE states:

> As explained in ABATE's Initial Brief these documents do not adequately describe the Company's engineering effort and instead simply assign costs, assert inadequately supported expectations, and do not provide sufficient information regarding what has been done so far as relates to the engineering effort. (ABATE Initial Br at 42; ABATE Reply Br at 10; see also MNSC Initial Br at 8-29 (objecting to certain proposed Belle River cost recovery).) As such, it is not clear whether DTE [Electric] will actually incur any costs associated with this project during the bridge period or projected test year in this case. It would therefore be premature to include the costs in rate base.
>
> Given the lack of a definite timeline for completing this project and the extended deadline recovering these costs at this time is neither reasonable nor prudent. The Commission should thus reject the Company's proposal.

ABATE's replies to exceptions, p. 3.

MNSC also responds and asserts that any misunderstandings about this project are created by DTE Electric's own description of the engineering study set forth on page 3 of Exhibit MEC-111. Per MNSC:

> DTE [Electric] has offered no explanation for why such a broad scope and comprehensive set of tasks, which the record shows led to a draft engineering study that is 750 pages long without the draft detailed cost analysis that was to come later, is needed to evaluate in the IRP whether a gas conversion should be pursued at Belle River. In short, DTE [Electric] has failed in its exceptions to provide any reason to reject the [ALJ]'s conclusion that the "excessive scope" of the engineering study leads to the conclusion that cost recovery here would be premature.

MNSC's replies to exceptions, p. 10 (footnote omitted). MNSC further argues that DTE Electric has not disputed that much of the information that it claims is needed to decide whether to proceed with conversion already exists—notably via the approximate $133,000 feasibility study completed in 2021 which determined feasibility and already identified a cost, timeline, and steps needed to complete the conversion, the latter being "a point that is effectively conceded when DTE [Electric] in its exceptions refers to the gas conversion as a [sic] 'minor,' 'relatively low-cost,' and 'expeditious.'" *Id*., p. 11 (citing DTE Electric's exceptions, p. 10); *see also*, MNSC's replies to exceptions, pp. 10-11 (referencing 5 Tr 782-784, 787-792).

The Attorney General also responds and argues that the ALJ's analysis and discussion on this issue are substantial and well-supported. The Attorney General further asserts that the company's argument about the ALJ's unreasonable demands for more evidence is "inapt and attempts to avoid the burden of proof." Attorney General's replies to exceptions, p. 8. Per the Attorney General, the ALJ does not demand more evidence but rather finds the company's evidentiary presentation to be lacking, and the company's repeat of testimony in exceptions should be rejected by the Commission. The Attorney General states:

> DTE [Electric] is asking for millions in funding for some nebulous engineering or pre-engineering studies, for which it has provided zero economic or cost-benefit analysis. Additionally, as ABATE points out, even if approval is granted it is not clear that this money would be spent during the test year. The ALJ's analysis and discussion are thorough and she correctly rejected this cost recovery. Accordingly, the Commission should adopt the ALJ's recommendation.

Id., p. 9.

The Commission finds the ALJ's recommended disallowance to be well-reasoned and supported by the record and accordingly adopts the ALJ's findings and conclusion on this issue.[12] The Commission is not convinced that the excessive scope and cost of this $2.474 million study is reasonable and prudent considering the evidence and arguments provided.

b. Monroe Bottom Ash Conversion (Effluent Limitation Guidelines) (B5.1, Page 2, Line 4)

DTE Electric included projected expenditures of approximately $23.6 million in the bridge period and test year for "necessary engineering and long-lead material procurement for an ELG [effluent limitation guidelines]-compliant bottom ash transport system that must be completed at [the] Monroe Power Plant by the December 31, 2025 EPA [Environmental Protection Agency] deadline." 5 Tr 652. Due to the lack of full company authorization, the Attorney General recommended that expenditures for this project for the 10 months in 2022 and the test year (i.e., approximately $15 million) be disallowed. 8 Tr 4778-4779; Exhibits AG-1.13, AG-1.14; Attorney General's initial brief, pp. 57-58. The Staff also noted the company's partial internal approval and recommended a disallowance of approximately $8.94 million (or 53%) for the difference between projected amounts and actual amounts/updated cost projections over the 22-month bridge period, along with a similar reduction (of 53% or approximately $3.52 million) in the test year, for a total recommended disallowance of approximately $12.46 million. 8 Tr 5328-5329; Exhibits S-10.4, S-10.5, S-11.3, and S-11.4; Staff's initial brief, pp. 8-10. ABATE, on the other hand, recommended full disallowance for expenditures in the bridge period and test year arguing that it is unclear if the utility will actually incur any costs associated with this project and if this project

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[12] Appendix E to the PFD failed to reflect the ALJ's recommended disallowance as set forth in the PFD. PFD, pp. 69-70. Since adopted, the Commission thus updates this disallowance amount of $2.474 million for this project through this order and for purposes of determining the company's revenue requirements.

will become used and useful during this time. 8 Tr 3027; ABATE's initial brief, pp. 42-43. DTE Electric rebutted. 5 Tr 729-734, 744-746; Exhibit A-40, Schedule EE1; DTE Electric's initial brief, pp. 27-31; DTE Electric's reply brief, pp. 14-16.

The ALJ, while finding the Staff's recommendation to be a reasonable alternative, concluded that DTE Electric had not established that it will spend any additional money on this project during the 10-month bridge period or test year (i.e., anything above existing 2020 and 2021 expenditures), pointing to the lack of corporate approval for the projected expenditures in 2022 and 2023 despite the utility's claims otherwise. PFD, pp. 73-74. The ALJ thus recommended that expenditures for this project in the 10-month bridge period and test year of $15.073 million be excluded from rate base. PFD, p. 74, Appendix E, line 7, column (c).

DTE Electric disagrees with the ALJ's "disregard of the record in favor of recommending decisions based on the absence of some additional authorization form in a batch of documents provided in response to discovery on June 29, 2022 – the same day that the hearing began." DTE Electric's exceptions, p. 15. Per the company:

> It is beyond credible dispute that the Monroe Bottom Ash conversion project is important and ongoing. In addition to the discussion above [in exceptions], [DTE Electric witness] Mr. Morren highlighted the importance of timing to meet compliance requirements, the complexity associated with making major modifications to four of the largest coal-fired generating units in the country, and the major project work that began in 2020 (Morren, 5 [Tr] 652, 745; Exhibit A-40, Schedule EE8; Exhibit AB-10, p 22). Moreover, each unit is effectively its own Bottom Ash Conversion (ELG) project. While the fourth and final unit does not need to be complete until the end of 2025, the other units need to have 100% of their work completed well ahead of time to meet regulation deadlines (Morren, 5 [Tr] 745-746).

DTE Electric's exceptions, pp. 15-16. Here, the company also noted its objection to ABATE's used or useful assertion in briefing, arguing that the Court of Appeals previously rejected the argument that the Commission is required to use the "'used and useful'" test in setting rates and that this is controlling precedent that must be followed. *Id*., p. 16, n. 24 (citing *ABATE v Pub Serv Comm*, 208 Mich App 248, 258-259; 527 NW2d 533 (1994)).

In response, ABATE argues that the company's claims in exceptions do not demonstrate that cost recovery is appropriate here. ABATE states:

> As explained in ABATE's Initial Brief, the Company's supporting documents indicate that the project is not expected to be in service until over two years after the end of the projected test year in this case and do not establish definitive timelines or assure the costs sought for recovery will be incurred in the period relevant here. As such, it is unclear whether DTE [Electric] will actually incur the costs sought in association with this project during the bridge period or projected test year. (ABATE Initial Br at 43; see Staff Initial Br at 8-10 (recommending a disallowance of $12,453,967 for the Monroe Bottom Ash conversion non-routine capital project over the bridge period and test year).)

ABATE's replies to exceptions, pp. 3-4. ABATE further argues that the company's mischaracterization about the used and useful recommendation is misguided. Per ABATE:

> As explained in ABATE's Reply Brief the Commission has previously agreed with a "comprehensive examination of the used and useful doctrine, and the limited exceptions thereto, as have long been applied by this Commission" which noted that "it is clear the Commission has not abandoned the used-and-useful principle." *In the Matter of the Application of Consumers Energy Co*, order of the Public Service Commission, entered March 29, 2018 (Case No. U-18322), pp 4-5. This "comprehensive examination" further stated that the "Commission has only rarely deviated from general adherence to [the] principle that investments must be used and useful before they may be recovered," and that "[i]n rate case after rate case, the Commission has explained rate base as 'the capital invested in used and useful plant.'" *Id*. As such, while the Commission is not *required* to utilize the used and useful test, it is certainly within its discretion and consistent with its past practice to do so. DTE [Electric]'s attempt to rebut an argument ABATE has not made detracts from the credibility of its recommendation and the Company's associated exceptions to the PFD should be accordingly rejected.

ABATE's replies to exceptions, p. 4 (emphasis and first and second alterations in original). Given that it is unclear if this project will become used and useful during the bridge period or test year, ABATE asserts that the Commission should not approve recovery. *Id*.

Also responding, the Attorney General argues that the ALJ's analysis and discussion on this issue are substantial and well-supported, that DTE Electric's irrelevant argument in exceptions should be rejected, and that the ALJ's conclusions and recommendations should be adopted. Attorney General's replies to exceptions, pp. 9-10. The Attorney General asserts that the ALJ considered the entire record on this subject and that it is unclear the relevance of timing when record evidence is received to the ALJ's decision-making, as administrative law judges must take the record as it comes. The Attorney General states that "[i]t is incumbent upon DTE [Electric] to support its requests and assertions by providing applicable documentation and where, as in this case, it fails to do so, the ALJ is correct to recommend disallowance." *Id*., p. 10.

The Commission finds the ALJ's recommended disallowance of $15.073 million to be well-reasoned and supported by the record and accordingly adopts the ALJ's findings and conclusion on this issue.

c. Monroe Flue Gas Desulfurization Wastewater (Effluent Limitation Guidelines) (B5.1, Page 2, Line 5)

DTE Electric included approximately $3.5 million for "engineering funding required to develop an ELG-compliant flue gas desulfurization (FGD) wastewater discharge treatment system at [the] Monroe Power Plant." 5 Tr 652. The utility stated that project approval has been received, that it "will test and evaluate alternative technologies that best meet the needs of the site-specific FGD wastewater streams at [the] Monroe Power Plant," and that "[i]t is critical to initiate this work now so that the preferred technology can be selected and installed by the required deadline." *Id*. Due to the lack of full company authorization, the Attorney General recommended that expenditures for this project be disallowed. Exhibit AG-1.13; Attorney General's initial brief, pp. 55-57. DTE Electric rebutted, arguing that full approval has been received and for

$3.7 million of work versus $3.5 million as originally projected. 5 Tr 733; DTE Electric's initial brief, pp. 19-21, 27-31; DTE Electric's reply brief, pp. 14-16.

The ALJ found that expenditures for this project during the 10-month bridge period and test year (i.e., $1.833 million) should be rejected. PFD, p. 75, Appendix E, line 8, column (c). More specifically, although noting that DTE Electric appears to have approved additional spending beyond 2021, the ALJ noted that spending per company documentation for 2022 and 2023 is '"to perform engineering for the technology that is selected to meet compliance,'" whereas only $1.7 million authorized for the project in 2020 and 2021 was found by the ALJ to be consistent with this project's scope of work as described in company testimony. PFD, p. 75 (referencing 5 Tr 652; Exhibit AG-1.69, pp. 5, 6). The ALJ further found that the project approval for 2022 and 2023 set forth on page 6 of Exhibit AG-1.69 "would have been granted well before DTE [Electric] indicated in Exhibit AG-1.13 that 'full authorization [is] expected beyond 2022'" and that the record is devoid of the technology to be employed and when the funds referenced for 2022 and 2023 will be spent. PFD, p. 76 (quoting Exhibit AG-1.13, p. 1). The ALJ stated that it appears that the company is taking its time to evaluate its options, consistent with company testimony. PFD, p. 76 (referencing 5 Tr 647).

DTE Electric disagrees and, in incorporating earlier discussion from its exceptions, asserts that the record supports its requested recovery for this project. DTE Electric's exceptions, pp. 12-15, 17. The company highlights the ALJ's acknowledgement that the projected spending for this project has been approved and argues:

> The [ALJ] suggests disapproval based on the lack of exactly parallel language between testimony and exhibits, and approval being granted sooner than expected, neither of which is a sound basis to deny cost recovery. The [ALJ]'s further discussion (beginning with "In addition") also cannot support a decision because, as indicated in section II above [in exceptions] (1) it neglects that the standard for recovery is preponderance of the evidence, and not the need to supply some

> additional evidence suggested (too late) by the [ALJ] after the record is closed, and (2) speculates about what DTE [Electric] "appears" to be doing based on the absence of such evidence. It is well established that an agency decision may not be based on speculation.

Id., p. 17. Per the company, it should recover the $1.8 million at issue. *Id*.

The Attorney General responds and asserts that none of the company's arguments in exceptions undercut the PFD on this issue. As done throughout the PFD, the Attorney General argues that the ALJ's discussion here demonstrates that she considered the entire record on this issue. Further, according to the Attorney General, "[t]he ALJ is also well-aware that the burden of proof in these rate cases is reasonable and prudent, based on a preponderance of the evidence, and clearly found that the lack of project approvals and lack of a coherent evidentiary presentation does not support recovery." Attorney General's replies to exceptions, pp. 10-11. Finally, as stated by the Attorney General, "none of the ALJ's recommendations in the PFD are based on speculation. Where the ALJ uses the word 'appears' it is an attempt by her to suss out what exactly DTE [Electric] is doing, in the face of incomplete, incompatible, or just plain missing evidence." *Id*., p. 11. The Attorney General thus asserts that the Commission should reject the company's exceptions on this issue and adopt the ALJ's recommendation. *Id*.

The Commission finds the ALJ's recommended disallowance of $1.833 million to be well-reasoned and supported by the record. Accordingly, the Commission adopts the ALJ's findings and conclusion on this issue.

d. Sibley Quarry Landfill Modification (B5.1, Page 2, Line 8)

DTE Electric included $24.073 million in the bridge period and test year for "improvements required to accept additional waste material, including coal combustion residuals (CCR) removed from [the] Monroe Power Plant." 5 Tr 653. According to the company, "[t]he project will focus on improvements to material handling at the site, including road improvements, a new conveyor system, replacement of discharge piping, and a new operations fill plan." 5 Tr 653-654. Based on Exhibit AB-10 and uncertainties surrounding completion dates and costs, ABATE recommended that expenditures for this project be disallowed. 8 Tr 3028-3029; ABATE's initial brief, p. 44. DTE Electric disagreed. DTE Electric's initial brief, p. 39; DTE Electric's reply brief, p. 20.

The ALJ found that DTE Electric has not supported its bridge period and test year expenditures, or the timing of the same, and that the company's documentation does not provide a basis to conclude that the costs for this project are reasonable and prudent. PFD, pp. 78-79.

DTE Electric disagrees and again argues that "the standard is preponderance of the evidence, not some need to somehow address additional issues after the record is closed." DTE Electric's exceptions, p. 18. The company further asserts that project forms requested and obtained through discovery that are misunderstood by intervenors cannot logically form the basis for a disallowance. DTE Electric reiterates that ABATE's own exhibit shows yearly actual spends and future forecasts, approvals, and other pertinent data, which is also reflected in company testimony, and that this project must be completed to support a timely and legally required closure. *Id*., p. 19 (referencing Exhibit AB-10, pp. 23-24; 5 Tr 747); *see also*, DTE Electric's initial brief, p. 39. Per DTE Electric, all proposed disallowances should therefore be rejected.[13]

ABATE responds and argues that, rather than a misunderstanding, "the material DTE [Electric] provided did not provide adequate detail regarding the status of the various projects relating to this proposal, the costs actually incurred so far, or whether any of the projects planned for 2021 were indeed completed as expected and forecast." ABATE's replies to exceptions, p. 5 (referencing ABATE's initial brief, p. 44). ABATE further reiterates its contentions that

[13] DTE Electric noted that "[t]he PFD narrative is inconsistent with Appendix E." DTE Electric's exceptions, p. 19, n. 26.

supporting documents appear to have been revised before this rate case to be consistent with proposed capital expenditures, that there is insufficient evidence that these projects have or will be completed during the bridge period or test year, that their associated costs are uncertain, and that the landfill modification project is not expected to be complete until fall 2025, thus meaning that this project will not become used and useful during the bridge period or test year in this case. ABATE's replies to exceptions, p. 5. In light of this, ABATE argues that it is unreasonable and imprudent to include these costs in customer rates and that the same should thus not be approved for recovery. *Id*., pp. 5-6.

Also responding, the Attorney General asserts that the ALJ's analysis and discussion on this topic are substantial and well-reasoned and that the ALJ's conclusions and recommendations should be adopted. Attorney General's replies to exceptions, p. 11. Per the Attorney General, "[i]t is unrefuted that DTE [Electric] has not supported the specific costs it will incur during the bridge and test year for [this] project[ ], which is a clear prerequisite for any recovery." *Id*. The Attorney General asserts that the company's exceptions primarily repeat testimony and incorrectly argue that the ALJ holds the company to a standard of addressing additional issues after the record closed. The Attorney General states that the ALJ was clear that DTE Electric's evidentiary presentation on this issue "was disorganized, unclear, and did not support the costs it seeks to recover." *Id*., p. 12. As argued by the Attorney General, "[i]t is not incumbent upon the other parties to the case to sort out DTE [Electric]'s insufficient presentation," and "DTE [Electric]'s attempts to shift the burden should be rejected." *Id*.

The Commission finds the ALJ's recommended disallowance of bridge period and test year expenditures to be well-reasoned and supported by the record. Accordingly, the Commission adopts the ALJ's findings and conclusion on this issue.[14]

2. Steam Plant—Non-Routine Removals (B5.1, Page 2, Lines 10-20)

In this cost category, DTE Electric projected capital expenditures of approximately $186 million during the bridge period and test year. Issues within this cost category are addressed below.

a. Cost of Removal as a Depreciation Case Issue

Considering the settlement agreement in DTE Electric's most recent depreciation case (Case No. U-18150), the Staff recommended removal of retirement costs with deferred accounting treatment instead. 8 Tr 5036-5037. DTE Electric disagreed with the Staff's interpretation of that settlement agreement and proposal. 7 Tr 2376-2379. DTE Electric did, however, offer an alternative proposal—that the company "include the costs in rates in the instant case, but subject to refund." 7 Tr 2789. More specifically, "should any actual expenditures ultimately be found to be imprudent and permanently disallowed for these specific projects, the Company will write-off the disallowed costs and record a regulatory liability for the 'return on' the costs included in base rates for refund to customers." 7 Tr 2789; *see also*, DTE Electric's initial brief, pp. 25-27. The Staff found the company's proposed alternative reasonable but with an added condition regarding the filing of detailed cost information in the company's next depreciation case, which DTE Electric accepted. Staff's initial brief, pp. 11-14; DTE Electric's reply brief, p. 14.

The ALJ outlined this issue and resolution by the parties in the PFD but found that this issue now raises confusion about the company's treatment of past and projected removal costs. PFD,

[14] Line 9, column (c) of Appendix E to the PFD reflects a disallowance amount of $4.244 million (ostensibly for expenditures in the 10-month bridge period of 2022 and the test year). This disallowance amount has, however, been updated in this order to reflect the full 22-month bridge period and test year expenditures of $24.073 million, which the ALJ recommended be disallowed in the PFD and the Commission adopts in this order. PFD, p. 78.

pp. 86-88. The ALJ thus recommended that the Commission require DTE Electric "to include a schedule detailing the company's removal-cost-related adjustments to the accumulated provision for depreciation in future rate cases." *Id*., p. 88. The ALJ further stated that, regardless of what the parties to the settlement agreement in Case No. U-18150 intended, "it cannot be interpreted to protect DTE [Electric] from having to support its accounting for removal costs when it relies on those removal costs to increase rate base in a rate case." *Id*., p. 89.

No exceptions were filed on this issue.

The Commission accepts the company and the Staff's resolution on this issue. Staff's initial brief, p. 14; DTE Electric's reply brief, p. 14. The Commission further finds the ALJ's recommendation for the company to include a schedule detailing its removal-cost-related adjustments to the accumulated provision for depreciation in future rate cases to be reasonable and accordingly adopts this recommendation. PFD, p. 88.

b. Monroe Bottom Ash Basin Closure (Coal Combustion Residuals) (B5.1, Page 2, Line 11)

DTE Electric included $57.328 million in projected expenditures for this project during the bridge period and test year "to remove [and transport to Sibley Quarry] all bottom ash [approximately 1 million cubic yards] from the inactive bottom ash basin at [the] Monroe Power Plant to meet the EPA's CCR regulation." 5 Tr 654. DTE Electric stated that the project received board of director approval in December 2019 and that closure of the Monroe bottom ash basin was initiated on October 21, 2020, in accordance with CCR rule requirements, with completion of closure due within five years. 5 Tr 654. ABATE objected to the expenditures, arguing that they should not be approved due to the project's completion date well after the test year and due to lack of support. 8 Tr 3030. In the alternative, if the Commission finds some level of capital expenditures for this project to be appropriate, ABATE recommended that amounts included in rates be tied to the project's planning documents. ABATE's initial brief, p. 46. DTE Electric rebutted, arguing that a review of the documentation relied upon by ABATE shows that substantial work has been completed and in logical fashion for this type of major project. 5 Tr 748 (referencing Exhibit AB-10, p. 38); *see also*, DTE Electric's initial brief, p. 39; DTE Electric's reply brief, pp. 20-21.

The ALJ found that DTE Electric had not established that its proposal includes reasonable and prudent expenditures that will actually be made as projected. PFD, p. 91. The ALJ found the company's statement regarding page 38 of Exhibit AB-10 to be "demonstrably untrue from a review of the form." PFD, p. 91. The ALJ mentioned requirements for detailing these projected expenditures from Case No. U-20561 and stated that "[i]t is not enough that the project is an important one, or that it needs to be completed by 2025." PFD, pp. 91-92. Rather, "DTE [Electric] needs to establish that it is spending the money prudently pursuant to a reasonable plan that can subsequently be reviewed with reference to something other than the total amount of spending." *Id*., p. 92. The ALJ highlighted evidence not provided by the utility to support its projected expenditures and thus recommended that the Commission decline approval of funding for this project. *Id*. The ALJ further noted that the ability to complete this project seems dependent on the completion of the Sibley expansion project discussed above, a project which itself includes timeline concerns. *Id*.

DTE Electric disagrees with the ALJ and incorporates earlier discussion in exceptions. DTE Electric's exceptions, pp. 17-18, 20. The company again asserts that ABATE's proposal was not supported by its own exhibit, "which shows that substantial work has been completed and is being done in a logical pattern for this type of major project" and which is also reflected in company testimony. DTE Electric's exceptions, p. 20 (referencing 5 Tr 748; Exhibit AB-10, pp. 35-38).

DTE Electric further argues:

> ABATE's and the [ALJ]'s criticisms are also inconsistent with real-world construction, where productivity and planned activities on major earth moving projects often vary greatly on a month-to-month and seasonal basis. The project is also required by state and federal regulations. Continuing the work effort in an uninterrupted manner is necessary, logical, and well-supported, so the [ALJ]'s proposed disallowance of $57.3 million should be rejected (Morren, 5 [Tr] 654, 748-749). Furthermore, Exhibit S-10.4 (pages 1-2) shows that a considerable amount of expenditures associated with the work (exceeding $20 million) occurred from 2021-2022. The [ALJ]'s criticism that *"DTE [Electric] has not provided RFPs, contracts, project milestones, <u>or anything</u> to show that the project is well managed and is going to be completed on some particular schedule"* cannot be squared with either the burden of proof or record in this proceeding. The burden of proof is a "preponderance of the evidence" --- not "beyond a reasonable doubt." There is authoritative testimony from Witness Morren that the Monroe Bottom Ash Basin Closure project work is being executed, the funding is being utilized, substantial work has been completed and is well under way in a logical pattern for this type of project with substantial progress made. Furthermore, it is undisputed that the work must be completed for all four (4) Monroe generation units (recall that this is the 4th largest power plant in the nation) by the end of 2025, so while more detail might be interesting, there can be no reasonable doubt (and logic dictates) that the effort will be rapid and substantial. (5 [Tr] 748-749)

DTE Electric's exceptions, pp. 20-21 (footnotes omitted, emphasis in original). The company thus asserts that ABATE's and the ALJ's speculation does not withstand scrutiny.[15] *Id*., p. 21.

ABATE argues that the company's claim in exceptions that substantial work has been completed and is being done in logical pattern does not demonstrate that cost recovery is reasonable or prudent. ABATE's replies to exceptions, p. 6. Despite further claims by DTE Electric about criticisms regarding its requested cost recovery, ABATE reiterates that the company's evidence showed that its projections were inconsistent with planning documents and that the company itself explained the uncertainty and variability of costs as the project proceeds.

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[15] DTE Electric notes that "[t]he PFD narrative is inconsistent with Appendix E." DTE Electric's exceptions, p. 20, n. 27.

Id. (referencing ABATE's initial brief, pp. 44-46). ABATE further repeats that the project is not required or expected to be completed until August 31, 2025; that the company did not provide actual expenditures to date or any information about what has actually been completed, project status, or what is left to do to complete the closure by that time; and that it is thus unclear what portion of costs associated with this project can reasonably be expected to be incurred during the bridge period or test year in this case. Here, ABATE also references the Staff's partial disallowance recommendation for this project. ABATE's replies to exceptions, p. 6 (referencing Staff's initial brief, pp. 11-14).[16] ABATE asserts that the Commission should thus disallow recovery of all projected capital expenditures associated with this project at this time or, in the alternative, "ensure that amounts included in rates are tied to the planning documents and accurate accountings of expenses actually incurred in accordance with planned timelines." ABATE's replies to exceptions, p. 7.

Also responding, the Attorney General argues that the ALJ's analysis and discussion on this issue are substantial and well-supported and that the ALJ's conclusions and recommendations should be adopted. Attorney General's replies to exceptions, pp. 9, 11.[17] Per the Attorney General, "[i]t is unrefuted that DTE [Electric] has not supported the specific costs it will incur during the bridge and test year for [this] project[ ], which is a clear prerequisite for any recovery." *Id*., p. 11. The Attorney General asserts that the company's exceptions primarily repeat testimony and incorrectly argue that the ALJ holds the company to a standard of addressing additional issues

[16] The Staff's partial disallowance recommendation is addressed directly above under "Cost of Removal as a Depreciation Case Issue."

[17] On page 9 of her replies to exceptions, the Attorney General argued this in reference to the Monroe *Fly* Ash Basin Closure project; however, considering the record, PFD, exceptions, and page 11 of her replies to exceptions, it appears that she intended to rather make this argument about the Monroe *Bottom* Ash Basin Closure.

after the record closed. The Attorney General states that the ALJ was clear that DTE Electric's evidentiary presentation on this issue "was disorganized, unclear, and did not support the costs it seeks to recover." *Id*., p. 12. As argued by the Attorney General, "[i]t is not incumbent upon the other parties to the case to sort out DTE [Electric]'s insufficient presentation," and "DTE [Electric]'s attempts to shift the burden should be rejected." *Id*.

The Commission finds the ALJ's recommended disallowance of projected expenditures to be well-reasoned and supported by the record. Accordingly, the Commission adopts the ALJ's findings and conclusion on this issue.[18]

c. Monroe Fly Ash Basin Closure (B5.1, Page 2, Line 12)

DTE Electric included projected expenditures of approximately $1.6 million during the bridge period and test year "to begin the engineering for closure of the fly ash basin." 5 Tr 654. According to the company:

> [o]nce the Monroe Fly Ash Basin ceases receipt of CCR material, which is required by December 31, 2023, basin closure must be initiated within 30 days and completion of the closure is required within 5 years (with the opportunity for up to five 2-year extensions if necessary) per the final CCR Rule.

5 Tr 654. Due to the lack of full company authorization, the Attorney General recommended that expenditures for this project be disallowed. 8 Tr 4778-4779; Exhibit AG-1.13. DTE Electric disagreed, pointing to Exhibit A-40, Schedule EE1. 5 Tr 733-734; DTE Electric's initial brief, pp. 20-21. The Attorney General replied that no new approvals had been obtained since the

[18] Line 10, column (c) of Appendix E to the PFD reflects a disallowance amount of $36.916 million (seemingly for expenditures in the 10-month bridge period of 2022 and the test year). This disallowance amount has, however, been updated in this order to reflect the full amount of projected expenditures of $57.328 million (for the 22-month bridge period and the test year), which the ALJ recommended be disallowed in the PFD and the Commission adopts in this order. PFD, p. 91.

company submitted its discovery response in Exhibit AG-1.13. Attorney General's initial brief, pp. 56-58; Exhibit AG-1.69.

Although agreeing with the Attorney General that no new approvals were granted, the ALJ stated that it appears that no additional approvals were required for this project. The ALJ reviewed pages 7 and 8 of Exhibit AG-1.69, which showed approvals of $800,000 in 2022 and $999,760 in 2023. The ALJ also reviewed Exhibit S-10.4 and found spending for 2022 roughly equal to the amount projected. The ALJ thus found it reasonable to include expenditures for this project in rate base. PFD, p. 93.

The Attorney General argues that the ALJ erred in part in her recommendation. While agreeing with the ALJ's inclusion of $800,000 for 2022 expenditures, the Attorney General objects to the ALJ's conclusion regarding 2023. Attorney General's exceptions, pp. 4-5. The Attorney General states that 2023 expenditures are not included on page 7 of Exhibit AG-1.69 and that page 8 of that exhibit shows that 2023 expenditures have only been approved by the project manager, not an officer of the company or a higher-level manager as part of an actual appropriation request. The Attorney General thus recommends that the Commission reject the ALJ's conclusion as it relates to 2023 expenditures and disallow $999,760 for lack of complete project approval of such costs. Attorney General's exceptions, p. 5.

In response, DTE Electric highlights the Attorney General's admission that the 2023 amount has been approved and argues that the Attorney General "provides no explanation, let alone the required evidentiary or legal support, for her suggestion that some additional approval might be required." DTE Electric's replies to exceptions, p. 9. The company asserts that the ALJ's recommendation is supported by the record and should be adopted. *Id*.

The Commission finds the ALJ's recommended inclusion of expenditures to be well-reasoned and supported by the record and accordingly adopts the ALJ's findings and conclusion on this issue. As referenced in the PFD, the company indicated that "[p]roject authorizations exceeding $10 million require an additional corporate level approval." Exhibit AG-1.13, p. 1; *see*, PFD, p. 92. Since the funding requested here is under that threshold, the Commission is not convinced that additional approvals for 2023 were thus required.

d. River Rouge, St. Clair, and Trenton Channel Decommissioning (B5.1, Page 2, Lines 17-19)

DTE Electric included projected expenditures of approximately $109.5 million during the bridge period and test year for decommissioning the company's River Rouge, St. Clair, and Trenton Channel power plants. Per the company, "[d]ecommissioning activities include the cost to isolate all unit systems and equipment to prepare them for removal from the site. This includes electrical, mechanical, plant controls, water and gas service shutdown, and disconnection from the transmission system." 5 Tr 655-656. Due to the lack of company approvals, the Attorney General recommended that expenditures be disallowed. Exhibits AG-1.13, AG-1.14, AG-1.69; Attorney General's initial brief, pp. 57-58. ABATE took issue with differing amounts in exhibits and recommended that projected expenditures be limited to the amounts set forth in the company's supporting documents. 8 Tr 3031-3032; Exhibit AB-10. DTE Electric rebutted. 5 Tr 734-735, 749-750; Exhibit A-40, Schedule EE1; DTE Electric's initial brief, pp. 20-22; DTE Electric's reply brief, p. 12.

The ALJ found that DTE Electric failed to support its projected timelines other than by providing details about its total spending projection, that the company failed to provide any meaningful analysis or information about these projects, and a lack of basis for the company's cost projections based on a review of Exhibit AG-1.69. PFD, pp. 97-100. The ALJ thus found that recommended exclusions of expense projections in the 10-month bridge period and test year should be adopted. *Id*., p. 100. As an additional note, the ALJ also compared the level of analysis provided by the company in Case No. U-16117 to that provided in the instant case and stated that, "[c]learly, DTE [Electric] knows how to provide a more detailed cost analysis for projects of this type." PFD, p. 100.

DTE Electric disagrees and incorporates prior discussions on this issue, including discussion on work already having been started and continuing being necessary and well-supported, along with discussion on the preponderance of the evidence and other decision-making standards. DTE Electric's exceptions, pp. 5, 21-22. On this, as an example, the company asserts that the ALJ speculates when discussing the approval provided on page 9 of Exhibit AG-1.69. DTE Electric further argues that pages 9-21 of Exhibit AG-1.69 contain substantial information that "refutes the conclusion in the PFD that 'DTE [Electric] has failed to support its projected timelines with respect to details other than a total spending projection [and] . . . [that] DTE [Electric] has failed to provide any meaningful analysis or information regarding these projects . . . .'" DTE Electric's exceptions, pp. 22-23 (citing PFD, pp. 97-100) (second alteration in original). The company thus asserts that additional revenue in the amount of $99.1 million should be approved here. DTE Electric's exceptions, p. 23.

ABATE responds and argues that because the evidence provided by DTE Electric did not adequately demonstrate that cost recovery is reasonable or prudent, the Commission should reject the company's exception and cost recovery requests for these projects. Per ABATE:

> [t]he documentation the Company provided to support cost recovery here was inconsistent and did not sufficiently support or justify cost recovery at this time. (See ABATE Reply Br at 14.) Further, the Company's assertion that defunding "the decommissioning projects should be rejected because the Company has already started this work and continuing the work uninterrupted is necessary and well-supported" is not a basis for providing cost recovery. (DTE [Electric's]

> Exceptions at 21.) The Company is free to continue working as it sees fit and request cost recovery when it is adequately supported. Doing so in advance of the Company's ability to support its request will only unreasonably and imprudently inflate customer rates.

ABATE's replies to exceptions, p. 7.

Also responding, the Attorney General asserts that the ALJ's analysis and discussion on this issue are substantial and well-supported and that the ALJ's conclusions and recommendations should be adopted. Attorney General's replies to exceptions, p. 12. The Attorney General further argues that the company's offhand reference to proper decision-making standards "provides no actual argument against the PFD and no support that the ALJ applied the incorrect standard to her discussion." *Id*., p. 13. Additionally, as stated by the Attorney General:

> DTE [Electric]'s chosen quotation that it says is speculation by the ALJ, is clearly not speculation. As DTE [Electric] brings this up numerous times in its exceptions, it is appropriate to provide the definition here. Speculation is "the forming of a theory or conjecture without firm evidence." The ALJ's observation, that DTE [Electric] fails to support what the required level of approval is for the projects in question is not "speculation." It is a factual observation that leads to the conclusion that DTE [Electric] has failed to meet its burden.

Id. (footnote omitted).

The Commission finds the ALJ's recommended disallowance to be well-reasoned and supported by the record. Accordingly, the Commission adopts the ALJ's findings and conclusion on this issue. The Commission also agrees with ABATE, here and in a number of other instances where proposed costs have been insufficiently supported to be included in customer rates at this time, that DTE Electric may "continue working as it sees fit and request cost recovery when [the costs are] adequately supported." ABATE's replies to exceptions, p. 7.

3. Steam Plant—Routine Capital Expenses (B5.1, Page 1, Line 2; B5.1, Pages 6-7)

a. The Michigan Department of Attorney General

The Attorney General initially took issue with six projects within this cost category based on the lack of internal approvals but later agreed that two projects had received approval. Exhibits AG-1.13, AG-1.14, AG-1.69; Attorney General's initial brief, pp. 57-58. DTE Electric objected. 5 Tr 732-733; Exhibit A-40, Schedules EE1 and EE2; DTE Electric's initial brief, pp. 19-20; DTE Electric's reply brief, pp. 11-12.

In light of discrepancies and approval and timeline concerns, the ALJ recommended disallowance of expenditures involving two projects. Specifically, the ALJ stated:

> Looking at the Renaissance Unit 1 project, it appears the approval form that DTE [Electric] relies on is page 29 of Exhibit AG-1.69. Mr. Morren reports this as spending approval for $19.8 million relative to the company's rate case bridge and test year projection of $24.1 million. A review of this page shows that $8.8 million of the capital expenditures reflected in the approval document are assigned to "prior years"; Mr. Morren did not address this. It appears the approved spending for the 10-month bridge and test year for this project that should be included in rates is limited to $11 million. For the Monroe project on page 7, line 181, DTE [Electric] is projecting expenditures of $1 million in the projected test year; Mr. Morren's exhibit acknowledges that approval is not expected until August. In the absence of additional supporting information showing that this project actually will proceed as scheduled, this [ALJ] recommends that it be excluded from rate base.

PFD, pp. 101-102.

DTE Electric disagrees and objects to the ALJ's expansion of the burden of proof after the fact, use of speculation, and engaging in analysis beyond that proffered by any party. DTE Electric's exceptions, pp. 23-24 (referencing PFD, p. 101). Per the company:

> This layering of additional hurdles for the first time in the PFD cannot form the basis for a disallowance. It is furthermore unclear what disallowance is even being recommended which provides yet one additional reason to reject the conclusions on this point in the PFD and simply approve the Company's reasonable and prudent proposal.

DTE Electric's exceptions, p. 24.

The Attorney General responds and argues that the ALJ's analysis and discussion on this issue are substantial and well-supported and that the ALJ's conclusions and recommendations should be adopted. Attorney General's replies to exceptions, p. 14. The Attorney General further asserts that DTE Electric's arguments in exceptions are baseless. Per the Attorney General:

> In no way does, "in the absence of additional supporting information" "expand the burden of proof." DTE [Electric] is grasping at straws as the ALJ's statement is simply pointing out that DTE [Electric] failed to provide sufficient support. Additionally, the word "appears," . . . does not connote "speculation." The final thing DTE [Electric] raises is the implication that an ALJ should not be engaging in analyses beyond what another party puts forth. This is also incorrect and DTE [Electric] provides no support for that statement. The [Attorney General] applauds and greatly appreciates this ALJ's willingness to dig into the record materials and consider everything available when coming to a decision. For DTE [Electric] to argue that an ALJ cannot or should not work hard to analyze the company's presentation and all available evidence is an affront to the process and to the hard work put in by the ALJ.

Id., pp. 14-15. And lastly, as to the disallowance recommendation, the Attorney General agrees that the ALJ could have been clearer; however, "a close review of the PFD shows that the ALJ is recommending 1) a cap on recovery for the Renaissance Unit 1 project of $11 million, for a disallowance of $13.1 million, and 2) a complete disallowance of recovery related to the Monroe project." *Id*., p. 15 (footnote omitted). The Attorney General maintains that these projects lack full authorization and that recovery should be disallowed as laid out in her brief and in the PFD.

The Commission finds the ALJ's recommended disallowances for the Renaissance Unit 1 Peaker Turbine Combustion Cans & Hot Gas Path Blades and the Monroe Unit 3 Waterwall Tubes projects to be well-reasoned and supported by the record. Accordingly, the Commission adopts the ALJ's findings and conclusion on this issue.[19]

b. Michigan Environmental Council; Natural Resources Defense Council, Inc.; Sierra Club; and Citizens Utility Board of Michigan

In accordance with the May 8 order, DTE Electric included in this case a net present value revenue requirement (NPVRR) analysis of four retirement date options (2023, 2026, 2028, 2030) for the company's Belle River power plant. 4 Tr 135-139; Exhibit A-12, Schedules B6.1-B6.3. Based on this analysis, the company determined a retirement date in 2028 to be in its customers' best interest. 5 Tr 712-713. MNSC took issue with the company's assumptions and inputs in this analysis and recommended disallowance of projected costs for five Belle River projects that DTE Electric acknowledges are avoidable with a 2026 retirement date. 8 Tr 4049, 4059-4068; Exhibit MEC-73; MNSC's initial brief, pp. 11-12. DTE Electric disagreed. 4 Tr 143-149; 5 Tr 751; Exhibit A-33, Schedules X1 and X3; DTE Electric's initial brief, pp. 31-38; DTE Electric's reply brief, pp. 18-19. MNSC replied. MNSC's reply brief, pp. 2-3.

The ALJ recommended that avoidable costs associated with the 2026 retirement date (i.e., $12.775 million) be excluded in this case. PFD, p. 110. The ALJ stated:

> Clearly, the economics of retirement and an evaluation of potential alternatives to meet capacity needs will be further evaluated in the IRP. In this meantime, as DTE [Electric] is continuing to evaluate its retirement options for Belle River, this [ALJ] recommends that the Commission exclude the avoidable costs associated with the 2026 retirement date. The uncertainty surrounding the retirement date, with an upper bound on either retirement or fuel switching seemingly committed by 2028, also causes a concern that DTE [Electric] will not actually invest in the avoidable costs, should funding be included in rates. While DTE [Electric] argues that the

[19] Disallowance amounts in column (c) for lines 2 and 3 of Appendix E to the PFD reflect disallowance amounts of $11.709 million and $868,000, respectively (seemingly based on figures derived from Exhibit AG-1.14). These disallowance amounts have, however, been updated in this order to reflect disallowance amounts based on figures requested by the company in Exhibit A-12, Schedule B5.1, p. 6, line 146, and p. 7, lines 181 and 197—thus a disallowance amount of $10.370 million for the Renaissance Unit 1 Peaker Turbine Combustion Cans & Hot Gas Path Blades project ($9.149 million + $12.221 million - $11 million (capped amount by the ALJ)) and $1.042 million for the Monroe Unit 3 Waterwall Tubes project.

> expenses are "required" while it continues to evaluate its retirement options, it has not established a firm commitment to spend the money as projected. Of course, the Commission will review, and can grant three-year cost approval for, further investments in Belle River in the IRP. Additionally, if DTE [Electric] does choose to invest in these specific projects, it will have the opportunity to seek recovery in its next rate case.

Id.

DTE Electric disagrees and argues that the ALJ's recommendation "is contrary to extensive record evidence and improvident in the current resource adequacy environment." DTE Electric's exceptions, p. 25. The company reiterates that it considered environmental changes, consistent with the May 8 order, and that its NPVRR analysis considered four alternative retirement dates with four capacity pricing alternatives but that its NPVRR cannot be viewed alone—that, as set forth in company testimony, other factors such as resource adequacy and grid reliability need to also be understood. DTE Electric's exceptions, pp. 25-27 (referencing 4 Tr 124-135, 5 Tr 712). DTE Electric further notes that the Commission expressed resource adequacy concerns in its July 2, 2021 order in Case Nos. U-20886 *et al*. (July 2 order) and June 23, 2022 order in Case Nos. U-21099 *et al*. (June 23 order). Considering resource adequacy risks, its NPVRR analysis, and avoided costs, the company decided that ceasing coal-fired operations at Belle River in 2028 would be in its customers' best interest. DTE Electric's exceptions, p. 28 (citing 5 Tr 712-713). DTE Electric further asserts that the ALJ neglected to consider testimony on behalf of ITC that the company's table showing MISO Zone 7 resource positions likely understates reliability risk. DTE Electric's exceptions, p. 30 (referencing 4 Tr 134, 8 Tr 4363). DTE Electric maintains that Belle River's capacity remains important to reliability in Zone 7 and that a hypothetical early retirement would risk a capacity shortfall. Against this background, the company reiterates its disagreement with the recommendation by MNSC and the ALJ that expenditures for five projects here should be disallowed as avoidable with a hypothetical retirement in 2026. Per DTE Electric:

> [the company] has committed to ceasing coal-fired operations at the plant by the end of 2028, but it has not decided to retire the plant in 2026. As discussed above, the plant's economic operation is justified in the near term, and the plant has value for resource adequacy. The Company's upcoming integrated resource plan (IRP) will evaluate the long-term plan for the plant, including its conversion to operate on natural gas. The capital expenditures in this rate case are required to continue the plant's safe and reliable operation while it continues to provide energy for customers.

DTE Electric's exceptions, p. 31. Thus, as asserted by the company, the proposed disallowances by MNSC and the ALJ should be rejected. *Id*.

ABATE responds and argues that the Commission should reject the company's recommendation, as DTE Electric's exception on this is "essentially a recapitulation of record evidence already discussed and addressed on the record, which . . . supports the [ALJ]'s recommended disallowance." ABATE's replies to exceptions, p. 8 (referencing ABATE's initial brief, pp. 41-42; ABATE's reply brief, pp. 10-11).

MNSC also responds and argues that, given DTE Electric's concession that the company's upcoming IRP will evaluate the long-term plan for Belle River, avoidable costs beyond 2026 should be disallowed "so that customers do not miss out on cost savings in the event that a 2026 retirement date is selected, and to ensure that the retirement analysis is not improperly skewed in favor of a 2028 retirement by turning the 2026 avoidable costs into sunk costs." MNSC's replies to exceptions, p. 13. MNSC further reiterates that "[s]uch disallowance is especially appropriate given that DTE [Electric]'s own NPVRR analysis shows that retiring Belle River in 2026 (or sooner) would be the lowest cost option for customers in all but a scenario that unreasonably assumes that MISO capacity prices would be at 100% of CONE [cost of new entry] through at least 2028." *Id*. Moreover, according to MNSC, DTE Electric's exceptions also fail because the ALJ's proposed disallowance here "is fully consistent with the Commission's approach to similar circumstances in which it disallowed or deferred recovery of capital expenditures that would be avoidable under retirement years that were to be considered in upcoming proceedings." *Id*. (citing December 17, 2020 order in Case No. U-20697 (December 17 order), p. 77; March 29, 2018 order in Case No. U-18322 (March 29 order), p. 24). MNSC contends that, despite discussing these decisions in its initial brief, DTE Electric did not acknowledge them in exceptions or address the fact that the Commission cautioned the company about capital expenses for Belle River in the company's 2019 IRP proceeding. MNSC's replies to exceptions, p. 13 (referencing MNSC's initial brief, p. 13, nn. 34, 35; February 20, 2020 order in Case No. U-20471, pp. 37-38). Per MNSC, "[d]isallowance of the 2026 avoidable costs is fully consistent with that caution." MNSC's replies to exceptions, p. 13. Continuing, MNSC avers that the company's resource adequacy concerns with a 2026 retirement date are exaggerated for several reasons: (1) while resource adequacy will presumably be a primary factor in the upcoming IRP evaluation of Belle River, to protect customers and avoid skewing the retirement evaluation, it is unnecessary to rate-base capital expenditures now that are avoidable under one potential retirement date scenario; (2) there has been no showing that the cost recovery of $12.775 million requested here is necessary to preserve resource adequacy and even if capital expenditures were now necessary, the company could proceed with the same and, as the ALJ notes, seek cost recovery in its upcoming IRP filing or next rate case; and (3) DTE Electric's gloomy resource adequacy picture painted by the company in exceptions does not reflect available evidence. *Id*., pp. 13-18 (referencing 8 Tr 4060-4061; Exhibit MEC-65; July 2 order, p. 8 (stating that all load serving entity-filed capacity demonstrations met the required level of planning resources for planning year (PY) 2024/2025); June 23 order, pp. 6-7, 14-15 (discussing capacity surpluses in PY 2022/2023 and PY 2025/2026, along with a number of measures that could improve the capacity position of Zone 7); Case No. U-21099, filing #U-21099-0067 (DTE Electric's comments opposing measures to improve the capacity position of Zone 7 in favor of relying on local resources); Exhibit A-33, Schedule X1, p. 11 (showing that Zone 7 is projected to have more committed capacity than its planning reserve margin requirement, along with additional potential new capacity on top of that); 8 Tr 4637 (ITC testimony on improving power transfer capability into Zone 7, not to prolong the life of uneconomic coal plants); and MNSC's initial brief, pp. 16-25 (addressing DTE Electric's forecast on rebuttal that changed methods and assumptions selectively to reach a pre-determined result to show that Zone 7 will be short on capacity in PY 2025/2026 if Belle River retires)). MNSC thus asserts that the ALJ's well-reasoned and supported disallowance recommendation of \$12.755 million in Belle River avoidable capital expenditures should be adopted by the Commission.

Also responding, the Attorney General argues that the ALJ's analysis and discussion on this issue are substantial and well-supported and that the ALJ's conclusions and recommendations should be adopted. Attorney General's replies to exceptions, p. 15. The Attorney General further argues that DTE Electric's exceptions on this issue "amount to a lengthy, unnecessary rehash of past cases and its testimony in this case, all of which is already in the record," and provide "very little that is actually responsive or, an 'exception' to the PFD." *Id.*, p. 16. The Attorney General asserts that it is inappropriate to simply regurgitate and reframe testimony to reargue what is already in the record. Per the Attorney General, the company's only argument, that the ALJ's proposed disallowance is contrary to the record, is not accurate; DTE Electric just disagrees with the conclusion, which is not appropriate grounds for an exception. The Attorney General states that she agrees with MNSC and the ALJ that uncertainty surrounding the retirement date supports the exclusion of avoidable costs associated with the 2026 retirement date. *Id.*

The Commission finds the ALJ's recommended disallowance of $12.775 million to be well-reasoned and supported by the record and accordingly adopts the ALJ's findings and conclusion on this issue. As noted by the ALJ, the Commission further highlights that the company does have the ability to renew its cost approval requests for these projects in its IRP or next general rate case.

4. Hydraulic Plant—Non-routine: Ludington Upgrade (B5.1, Page 2, Line 23)

DTE Electric included $18.142 million in projected expenditures for this project, which began in 2015, will be completed in 2022, and is being managed by Consumers Energy Company (Consumers), Ludington Pumped Storage Plant's majority owner. These expenditures, per DTE Electric, represent a 49% share of the project's costs. 5 Tr 656. The Staff recommended adjustments totaling $3.305 million to account for actual expenditures and updated projections in the bridge period and test year. 8 Tr 5330; Exhibit S-11.3, p. 1; Staff's initial brief, pp. 10-11. DTE Electric did not dispute these adjustments.

The ALJ recommended that the Staff's adjustments be adopted. PFD, p. 111, Appendix E, line 16, column (c).

No exceptions were filed on this issue.

The Commission finds that the ALJ's recommendation is well-reasoned and should be adopted.

5. Other Plant—Non-Routine (B5.1, Page 2, Lines 26-32)

a. Blue Water Energy Center (B5.1, Page 2, Line 27)

The Staff recommended that $8.1 million in contingency be removed from this line item. Staff's initial brief, pp. 144-145. DTE Electric did not object.

The ALJ concluded that the Staff's proposal is reasonable and recommended that it be adopted. PFD, p. 111, Appendix E, p. 2, line 100, column (c).

No exceptions were filed on this issue.

The Commission finds that the ALJ's recommendation is well-reasoned and should be adopted.

b. Blackstart Infrastructure, Site Security, North American Electric Reliability Corporation Compliance (B5.1, Page 2, Line 29)

DTE Electric included $47.792 million in projected expenditures during the bridge period and test year for projects here to "support the North American Electric Reliability Corporation (NERC) [Blackstart] plan and procedures to improve the reliability of the electric grid." 5 Tr 658. The Attorney General objected, arguing that the company has not provided sufficient information to adequately justify the expenditures. 8 Tr 4793-4795; Confidential Exhibit AG-1.18; Attorney General's initial brief, pp. 62-63. The Staff also recommended reductions of approximately $19.4 million in the bridge period and test year to address internal approvals and actual spending amounts. 8 Tr 5306-5308; Exhibits S-10.4 and S-10.5; Staff's initial brief, pp. 15-16. DTE Electric rebutted. 5 Tr 730, 738-741; DTE Electric's initial brief, pp. 22-23; DTE Electric's reply brief, pp. 12-13.

The ALJ found that the Attorney General's recommendation should be adopted. PFD, p. 114. Per the ALJ:

> The lack of [corporate] approval, the company's inability to share details of the project, the lack of information regarding the total project cost or project completion date, and the information in Staff Exhibit S-10.4, page 1, showing actual 2021 expenditures of $384,000, well below the company's 2021 rate case projection of $4.1 million, and actual expenditures for the three months of 2022 of only $105,000, cast doubt on the reliability of the company's forecast[ed] expenditures.

Id., p. 115. The ALJ thus recommended that bridge period and test year expenditures be excluded. *Id*.

DTE Electric disagrees and argues that the ALJ's lack of approval reasoning is contrary to her own recognition that its exhibits reflect approvals. DTE Electric's exceptions, p. 32 (referencing PFD, p. 114; Exhibit S-10.5; Exhibit A-40, Schedule EE1; Exhibit AG-1.69, p. 2). DTE Electric additionally takes issue with the ALJ's opinion that the company appears to be relying on Exhibit AG-1.69 and the ALJ's further speculation "that it might not reflect enough approval because it is only signed by Timothy J. Lepczyk (PFD, pp. 114-15), despite the record reflecting that he is the Assistant Treasurer and Director of Corporate Finance, Insurance and Development for DTE Energy and its subsidiaries, including DTE Electric (Lepczyk, 7 [Tr] 1279)." DTE Electric's exceptions, p. 32. The company states that this project is also proceeding forward, "which plainly would not happen if it were not approved." *Id*. DTE Electric further objects to the ALJ's criticism about the company's inability to share details about the project that it contends "falls wide of the mark in light of the record evidence and controlling law," as the company does not decide Blackstart infrastructure improvements and cannot disclose specific locations and work efforts associated with Blackstart facilities. *Id*., p. 33. Per DTE Electric, the Commission should reject all proposed disallowances, as "[i]t would be unlawful and unreasonable to deny cost recovery based on the Company's compliance with security requirements." DTE Electric's exceptions, p. 33.[20]

The Attorney General responds and argues that the ALJ's analysis and discussion on this issue are substantial and well-supported and that the ALJ's conclusions and recommendations should be adopted. Attorney General's replies to exceptions, p. 17. The Attorney General further asserts that DTE Electric's exception provides nothing new to the discussion. Per the Attorney General:

[20] DTE Electric notes inconsistency between the PFD and Appendix E here as well. DTE Electric's exceptions, p. 33, n. 37.

> The ALJ's analysis and discussion in the PFD highlights DTE [Electric]'s disjointed and unintelligible string of documents purporting to show approval for the project. DTE [Electric]'s exceptions argue only that its documentation "reflect[s] approval" but not at what level, which was the ALJ's point in finding that DTE [Electric] does not have "corporate approval" to proceed with 2022 expenditures for the project. This is a constant theme throughout this case, and in fact ever since DTE [Electric] moved to fully projected test years – DTE [Electric] requesting massive cost recovery for projects that there is very little proof or precedent that it is likely to undertake by the end of the test year, and then arguing that it is unreasonable to withhold funding because its haphazard documentation does not prove that the projects will *not* go forward in the proffered timeframe.
>
> DTE [Electric]'s exceptions also accuse the ALJ of "further speculat[ing]" about the level of approval and then imply that other parties to the case should have an intimate knowledge of the intra-company chain of approval. The rest of DTE [Electric]'s exception, on page 33, is a restatement of testimony that the ALJ appropriately dismissed.

Id., pp. 17-18 (emphasis in original; footnotes omitted).

The Commission finds the ALJ's recommended disallowance of projected expenditures to be well-reasoned and supported by the record. Accordingly, the Commission adopts the ALJ's findings and conclusion on this issue.[21]

c. Hydrogen Fuel System Pilot (B5.1, Page 2, Line 30)

DTE Electric included $19.011 million in projected expenditures for this pilot project during the bridge period and test year "to produce and utilize green hydrogen as a fuel source at Blue Water Energy Center [BWEC] to aid in future carbon reduction," in line with the company's goal of net zero carbon emissions by 2050. 5 Tr 659. Per DTE Electric, "[t]he project includes the construction of an 11 MW electrolyzer plant with storage capacity and a fuel blending station that

[21] Line 19, column (c) of Appendix E to the PFD reflects a disallowance amount of $18.283 million. To match what the ALJ recommended on page 115 of the PFD and which the Commission adopts here, however, this disallowance amount has been updated in this order to reflect the full amount of projected expenditures of $47.792 million as set forth in Exhibit A-12, Schedule B5.1, p. 2, line 29, columns (c) + (d) + (f).

can support up to 5 percent of the Blue Water Energy Center's fuel requirement." 5 Tr 659. The Staff, the Attorney General, ABATE, GLREA, and MNSC objected (in all or in part). 8 Tr 3023-3025, 3240-3248, 4079-4084, 4783-4787, 5308-5315; Exhibit S-10.4; Staff's initial brief, pp. 16-19, Appendix E, p. 1, line 13, column (c); Attorney General's initial brief, pp. 58-60; ABATE's initial brief, pp. 40-41; GLREA's initial brief, pp. 10-12; MNSC's initial brief, pp. 136-141. DTE Electric rebutted. 5 Tr 741-743; DTE Electric's initial brief, pp. 39-40; DTE Electric's reply brief, pp. 21-22.

The ALJ found the testimony on behalf of Staff, the Attorney General, ABATE, GLREA, and MNSC to be persuasive that DTE Electric has not justified the cost of this pilot project relative to its potential benefits and thus recommended that funding for the pilot be rejected/limited to the amount recommended by the Staff (i.e., $18.240 million reduction in projected expenditures but allowing expenditures in the bridge period for engineering feasibility studies). PFD, pp. 125-127, Appendix E, line 20, column (c); *see also*, 8 Tr 5313-5314; Staff's initial brief, p. 17. The ALJ further found that the company had not presented information in compliance with the pilot program standards, contrary to some witnesses' testimony, in that the company did not provide detailed costs, only limited cost information on page 4 of Exhibit A-12, Schedule B5.1.2, along with limited pilot project timeline details on page 5 of the exhibit that do not provide timelines for steps (engineer, procure, install, and permitting) identified in Exhibit AB-10, pp. 5-6. The ALJ stated:

> Had the company presented a project timeline organized to include project management steps, completion of engineering, bidding, contracting, permitting, etc., there would not be confusion over the importance of one project number of the two project numbers associated with the project. Also, while DTE [Electric] objects to [ABATE witness] Ms. York identifying a change in the schedule for project 17315 as a basis for caution—as shown in Exhibit AB-10, comparing pages 8 and 11—that project shows that DTE [Electric] is evaluating the possibility of running the BWEC on significantly greater percentages of hydrogen fuel than the

> 5% manufacturer's rating, which itself is significantly greater than the capacity of the pilot project, as explained by [Staff witness] Mr. DeCooman, [Attorney General witness] Mr. Coppola, and [MNSC witness] Mr. Comings. DTE [Electric]'s own documents link those projects, as shown by Exhibit AB-10, pages 6, 7, 9, and 10. The latest PAT [project approval team] for project 17315 seeks funding for an "additional (next steps) engineering evaluation for H2 [hydrogen] integration and production options at BWEC." That is, DTE [Electric] is considering alternatives to supply hydrogen for BWEC, and to run BWEC at significantly greater hydrogen amounts than can be supplied by the pilot, and that engineering study will not be completed until the end of 2023. Thus, DTE [Electric] wrongly dismisses ABATE's concerns with the company's commitment to this project, which is not planned [to] start construction until 2023 and not planned to be in-service in 2024.

PFD, pp. 126-127. More significantly, however, the ALJ found persuasive testimony that the company failed to show that the pilot is in its ratepayers' best interests. The ALJ found that the company "failed to establish that it will be economic to operate this plant" and also "correspondingly failed to explain what it will do with the plant if it sits idle after construction." *Id*., p. 127. Further, per the ALJ, "DTE [Electric] would also expect to recover the removal costs for this project if it is not useful, and DTE [Electric] has failed to show what those costs are." *Id*.

DTE Electric disagrees and asserts that it "is unreasonable to give little weight to numerous factors favoring the pilot." DTE Electric's exceptions, p. 34 (referencing 5 Tr 743). Further:

> Although perhaps moot, the Company also takes exception to the [ALJ]'s further comments misconstruing a disproven and abandoned matter (PFD, pp 126-27). ABATE witness York proposed a full disallowance due in part to the engineering efforts for PMP [Project Management and Planning] 17315 having later completion dates than are found in PMP 17600 (8 [Tr] 2024-2025). Witness York confused two different things. Mr. Morren explained that PMP 17315 (a $466,000 ancillary engineering project designed to provide insight into the future ability of BWEC to operate with up to a 100% hydrogen fuel blend) is not in any way associated with PMP 17600, which concerns the construction of the pilot project to produce and consume hydrogen. Therefore, witness York's proposal was unfounded (Morren, 5 [Tr] 741-742). ABATE did not dispute the Company's explanation that ABATE's witness confused two different engineering projects.

DTE Electric's exceptions, pp. 34-35.

ABATE responds and asserts that the Commission should reject DTE Electric's recommendation, as the company's exception on this issue "is essentially a recapitulation of record evidence already discussed and addressed on the record, which . . . supports the [ALJ]'s recommended disallowance." ABATE's replies to exceptions, p. 8 (referencing ABATE's initial brief, pp. 40-41; ABATE's reply brief, pp. 9-10.)

MNSC also responds and asserts that the Commission should adopt the ALJ's recommended disallowance of costs. MNSC contends that DTE Electric only offers cursory opposition to the PFD in exceptions and does not address any of the objections to the pilot proposal that the ALJ relied upon in recommending disallowance. Further:

> DTE [Electric] has similarly passed up multiple opportunities to address critiques of the hydrogen pilot. As highlighted [earlier in MNSC's replies to exceptions], Staff, MNSC, ABATE, and GLREA identified numerous objections to the pilot proposal in their testimony in this proceeding. Yet DTE [Electric] did not address any of those objections in its rebuttal testimony, and instead merely added the cursory list of new factors that DTE [Electric] continues to cite to in its Brief on Exceptions. Similarly, DTE [Electric] could have cross examined any of the Staff or intervenor witnesses on their objections but declined to do so. DTE [Electric] could have also engaged those objections in its post-hearing briefs but, again, declined to do so. In short, DTE [Electric] has failed multiple times to even attempt to support its hydrogen pilot proposal, despite many opportunities throughout this proceeding to do so.

MNSC's replies to exceptions, p. 21. MNSC maintains that this project is "costly, unsupported, and has no guarantee to truly be 'green,'" absent any assurance from the company that the hydrogen production would actually be carbon-free and 100% renewable. *Id*.

Also responding, the Attorney General argues that the ALJ's analysis and discussion on this issue are substantial and well-supported and that the ALJ's conclusions and recommendations should be adopted. Attorney General's replies to exceptions, p. 18. The Attorney General states that DTE Electric's exceptions only amounted to a statement about unreasonable weight given to numerous factors favoring the pilot and a paragraph discussing a disproven and abandoned matter, nothing else, aside from reference to testimony that the ALJ fully considered. Based on the ALJ's thorough analysis and well-supported opposition provided by Staff, the Attorney General, ABATE, MNSC, and GLREA, the Attorney General asserts that DTE Electric's exceptions should be rejected and the ALJ's recommendation should be adopted.

The Commission appreciates the continued pursuit of new technologies, business models, and pilots that support the company's efforts toward a safe, reliable, and affordable energy transition as well as the company's interest in exploring the potential opportunities hydrogen production may provide. The Commission, however, stresses the importance of following the best practices for developing new pilots noted in the Staff report and Commission order issued in Case No. U-20645. As stated in that case, the Commission recognizes that worthwhile pilot programs may not initially be cost-effective. February 4, 2021 order in Case No. U-20645 (February 4 order), p. 10. The goals and desired learnings for such pilots, however, must be clearly articulated, and the benefits of full-scale deployment assessed. In the case of the company's proposed hydrogen fuel pilot, the Commission is neither convinced that the goal of the hydrogen pilot, nor its future application and its ultimate benefits to ratepayers, has been clearly asserted, and thus do not justify the significant expenditures proposed by the company. Furthermore, the Commission agrees with concerns from intervenors regarding the availability of "excess renewables" to operate the electrolyzer and, in the absence of curtailed renewables, the risk that the hydrogen produced by the project would be carbon intensive. Furthermore, the Commission agrees with the comments provided by intervenors that the company should continue to monitor and review the learnings and experiences from the other utilities currently investigating and pursuing hydrogen pilots and full-scale projects. The Commission therefore agrees with the ALJ that it is appropriate to reject approval for the proposed expenditures for the pilot project at this time and adopt the Staff's adjustment.

d. Slocum Battery Pilot (B5.1, Page 2, Line 31)

DTE Electric included $33.663 million in projected expenditures for this pilot project "to replace the diesel-fueled peakers at the Company's Slocum peaker site located in the City of Trenton with a 14 MW / 56 MWh[ ] [megawatt-hour] lithium-ion (Li-ion) battery energy storage system (BESS)," which "will store excess energy that is generated on the grid during off-peak hours" for the energy to "then be available for dispatch during higher-priced peak hours." 5 Tr 667-668. The Staff, albeit generally supportive of the project, partially objected to projected expenditures due to fluidity concerns over projected amounts, whereas the Attorney General objected to the company's projected expenditures in whole based ultimately on excessive expense and economic viability concerns over BESS units at this time. 8 Tr 4787-4796, 5318; Exhibits S-10.4, S-10.5, AG-17; Staff's initial brief, pp. 19-21; Attorney General's initial brief, pp. 60-62. EIBC/IEI generally supported the project but recommended that third-party ownership models and stakeholder involvement be considered. 8 Tr 4399-4401. DTE Electric rebutted arguments on behalf of the Staff and the Attorney General. 5 Tr 736-738, 761-762; Exhibit A-40, Schedules EE3 and EE4; DTE Electric's initial brief, pp. 40-41; DTE Electric's reply brief, pp. 23-24.

The ALJ agreed with the Attorney General's recommendation that project funding for the bridge period and test year should be excluded from rate base. PFD, p. 131. While the ALJ found the Staff's confidence in the reasonableness of this project to persuasively address the Attorney General's concerns with the benefits of the pilot, the ALJ nevertheless found, in agreement with the Staff, that DTE Electric had not established a consistent spending plan for this project and that its documentation was rather "confusing and inconsistent" with the company's testimony. *Id*., pp. 131-133 (referencing 5 Tr 670; Exhibit A-12, Schedule B5.1.3, pp. 3-4; Exhibit A-40, Schedule EE4, p. 3; Exhibit S-10.4, p. 2, line 30). The ALJ stated that the company should have acknowledged its approved timeline in rebuttal testimony and concluded:

> Because DTE [Electric] has not established that the project will be completed as originally presented, and because the pace of its spending is well behind the pace expected to meet the 2024 in-service date, this [ALJ] finds that the projected costs should be excluded from rate base as Mr. Coppola recommended, with the expectation that DTE [Electric] will present its actual plans in its next rate case.

Id., p. 133.

DTE Electric disagrees. The company highlights the Staff's general support of the project and acknowledgement of full internal budgetary approval and notes that the project involves substantial costs, as reflected in recently and accurately approved numbers. DTE Electric's exceptions, p. 37 (referencing Staff's initial brief, p. 20). DTE Electric continues:

> The [ALJ]'s indicated concerns are speculative, overstated, raise new concerns after the record is closed, and otherwise do not provide a sound basis for the [ALJ]'s proposed 100% disallowance. It bears emphasis that the [ALJ]'s new post-hearing concerns regarding Exhibit A-40 Schedule EE4, a Company discovery response offered only to respond to the Attorney General's asserted concern that the BESS project had not received sufficient internal approval (which it had; see 5 [Tr] 737), misunderstands both the limited purpose for which the evidence was offered as well as the Company's internal processes involving CARF [capital appropriation request forms] and PAT forms. While there may be some conceptual appeal to the expectation that internal forms will reconcile, attempting to do so (especially for the first time in the PFD) for ratemaking purposes disregards those forms internal functions and commercial reality. Particularly troubling is the recommendation to accept a disallowance amount premised upon a lack of internal approval advocated by Witness Coppola, when the BESS was clearly approved by the Chief Executive Officer. (PFD pp. 131-133)[.]

DTE Electric's exceptions, p. 37. The company thus asserts that the Commission should reject all proposed disallowances.[22] *Id*.

The Attorney General responds and argues that the ALJ's analysis and discussion on this issue are substantial and well-supported and that the ALJ's conclusions and recommendations should be adopted. Attorney General's replies to exceptions, p. 18. The Attorney General further asserts that DTE Electric is grasping at straws in its exceptions. Per the Attorney General:

> As for the PFD being "speculative, overstated," and not providing "a sound basis for the . . . proposed 100% disallowance," there is no follow-up to that. It is merely unsupported claims. The [Attorney General] replies that the [ALJ] is again thorough in [her] approach to this section and properly couches [her] conclusions and recommendations in the myriad, reasonable concerns raised by other parties and in DTE [Electric]'s complete lack of support or documentation that it provided information to meet pilot program standards. DTE [Electric] also provided no reply in exceptions to the finding that it failed to show that the pilot is in ratepayers' best interest.
>
> As to DTE [Electric]'s contention that the [ALJ] raises new concerns after the close of the record, this is an irrelevant red herring. By definition, the ALJ's work-product, including analyses and recommendations, in the form of a PFD, comes after the close of the record. If an ALJ discovers or sees new issues that are of interest to the parties, the Commission, and the company, then it would be folly for her not to raise them. Again, this is a burden shifting tactic. Where DTE [Electric] has not fully supported its proposals and requests, such that the ALJ is citing new or continued concerns in the PFD, then that reflects a failure of DTE [Electric] to meet its burden.

Id., pp. 19-20. The Attorney General continues that ALJs have statutory authority to conduct hearings and prepare PFDs, which includes making recommendations and the ability for the ALJ to identify and flag issues for the Commission's review when rendering its final decision. Finally, as stated by the Attorney General:

> DTE [Electric]'s statement that "[w]hile there may be some conceptual appeal to the expectation that internal forms will reconcile, attempting to do so . . . for ratemaking purposes disregards those forms internal functions and commercial

[22] DTE Electric again notes inconsistency between the PFD and Appendix E. DTE Electric's exceptions, p. 37, n. 38.

> reality." That is an exceptional statement to see in DTE [Electric]'s argument. The company is basically saying that the evidence it gave to support its projected spending does not make sense – "sure it would be nice if it did, but that ignores internal functions and commercial reality." The [Attorney General] is not sure what is meant by commercial reality, but it is certainly not the ALJ's, intervenors', or Commission's job to reconcile DTE [Electric]'s evidence. The burden is squarely on DTE [Electric] to support its requests and where its evidence, by its own admission, contradicts itself in such a way as to make it impossible to reconcile, then that burden has not been met.

Id., pp. 20-21 (footnote omitted).

While the Commission is concerned by the inconsistency in documentation on the record and acknowledges that submission of internal company approval on rebuttal frustrates review by the parties, the Commission finds the Staff's confidence in the reasonableness of the project persuasive and adopts the Staff's partial disallowance for the bridge period and full disallowance for the test year to address the company's lack of support for changing and fluid project costs. 8 Tr 5315-5319; Exhibit A-12, Schedule B5.1; Exhibit S-10.4; Staff's initial brief, pp. 19-21.[23] The Commission expects the company to present actual plans for the remainder of the project in its next rate case.

C. Nuclear Production (Exhibit A-12, Schedule B5, Line 6)

The three projects below are classified under routine and small projects for the company's Fermi 2 nuclear power plant. Per DTE Electric:

> Routine and Small Projects are those capital expenditures associated with maintaining the various assets that support the safe operation of the Fermi 2 asset and includes work such as pump, motor, valve and reactor control component replacements and can typically be expressed in number of units replaced. Routine and Small Projects are reasonable and prudent because these types of projects are the core of our proactive maintenance regime to maintain nuclear safety.

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[23] Based on the Staff's supporting documentation, the Commission finds the proper partial disallowance amount here to be $28.187 million (rounded). *See*, Exhibit S-10.4, p. 2, line 30, and Exhibit A-12, Schedule B5.1, line 31, column (f) ($1.757 million+$26.430 million).

7 Tr 2541. The Attorney General took issue with the projects set forth below. 8 Tr 4796-4802.

1. Plant Radio System Project (Schedule B5.3, Page 2, Line 28)

DTE Electric included $7.205 million in projected expenditures for this project during the bridge period and test year. The Attorney General objected to the expenditures and recommended that they be excluded for lack of reasonableness and prudence. 8 Tr 4800; Attorney General's initial brief, pp. 65-66; Attorney General's reply brief, p. 11. DTE Electric disagreed. 7 Tr 2577-2584; DTE Electric's initial brief, pp. 43-45; DTE Electric's reply brief, pp. 24-26.

The ALJ concluded that DTE Electric failed to establish that its expenditures are reasonable or will be made as projected in the bridge period and test year. The ALJ stated:

> The company did not establish that [DTE Electric witness] Mr. Davis's direct testimony or the referenced Attachment 9 contained any additional information overlooked by Mr. Coppola. The Attorney General included a portion of this information in Exhibit AG-1.66. The importance of a communication system to the safe and efficient operation of the plant is not the issue. The issues are whether DTE [Electric] established that it will spend the forecast amounts in the bridge and test year, and whether the total amount is reasonable. Mr. Davis's reliance on the company's "prioritized list of projects" only confirms that the expenditure is indefinite. Mr. Davis's rebuttal testimony as quoted above [in the PFD] misleadingly suggests that he explicitly mentioned the radio system in his direct testimony, which he did not.
>
> Mr. Davis's claim that Mr. Coppola somehow erred in referring to the radio system as "facilities" or "plant equipment" is unpersuasive and of no relevance to the question of whether DTE [Electric] provided adequate support for its projected expenditures. Note that the Atomic Energy Act is replete with use of the word "facilities." Finally, DTE [Electric]'s objection to the Attorney General citing without further reiterating pages of Mr. Coppola's testimony is actually helpful and not objectionable.

PFD, p. 137.

DTE Electric disagrees and asserts that, contrary to the ALJ's conclusion, the expenditures are supported by the evidence. The company further argues that there is no need for it to prove that the Attorney General's witness overlooked something and asserts that the ALJ's "further speculation about the future also neglects that the importance of the system supports the reasonableness and certainty of the expenditure." DTE Electric's exceptions, p. 39. DTE Electric argues that the ALJ incorrectly characterizes company testimony which "explained the principles applied in determining how to properly maintain Fermi 2, including that the Company applies 'a high degree of rigor', and 'conservatism' with a recognition that safety is a particular priority in operating a nuclear power plant." *Id*. (citing 7 Tr 2538-2539). The company states that the plant radio system "provides the necessary communications network for the safe operation of Fermi 2, and must remain operable during all postulated scenarios of plant operations because the system is credited in the Fermi 2 Emergency Response Plan and 10 CFR 50.47 and 10 CFR 350." DTE Electric's exceptions, p. 39 (referencing 7 Tr 2579). Further, per DTE Electric, the performing work at Fermi 2 is not just precautionary work but rather unique work performed to the highest levels of nuclear standards. The company thus argues that the ALJ's proposed disallowance should be rejected. DTE Electric also objects to the ALJ's indication that testimony on behalf of the Attorney General without citations is helpful and not objectionable. Referencing Mich Admin Code, R 792.10434(3), the company avers that, "in light of the substantial volume of material and tight timeframes in this proceeding, reasonable citation to the record is also the most practical approach to orderly briefing." DTE Electric's exceptions, p. 40. Lastly, in relation to this project and the other two nuclear projects below, the company notes that "while the PFD narrative implies agreement with certain aspects of the [Attorney General]'s arguments regarding the three contested nuclear generation capital projects, . . . the [ALJ] stopped short of recommending a disallowance of the three contested nuclear generation capital projects." *Id*., p. 44.

The Attorney General responds and argues that the ALJ's analysis and discussion on this issue are substantial and well-supported and that the ALJ's conclusions and recommendations should be adopted. Attorney General's replies to exceptions, p. 21. The Attorney General further asserts that the ALJ did not stop short of recommending a disallowance on this project and the other two nuclear projects below. The Attorney General states:

> A review of the ALJ's discussion on the three topics makes clear that she agrees with the [Attorney General]'s analysis and discussion at every turn, clearly stating that DTE [Electric] did not meet its burden to support that "the level of its projected expenditure for this line item is reasonable or that the expenditures will actually be made as projected." The substance of the PFD is a clear recommendation to the Commission that these costs should be disallowed. DTE [Electric]'s argument to the contrary is designed to mislead and is unhelpful in a case of this size.

Id., p. 22 (footnote omitted). Continuing, the Attorney General argues that DTE Electric's exceptions do not add anything new to reply to and states that it is unclear what exactly the company finds to be speculative about the PFD but contends that it appears to be the ALJ's conclusion that DTE Electric has not supported that the company's expenditures will actually be made as projected. Per the Attorney General:

> Again, as long as DTE [Electric] uses projected test years in these rate cases, by their very nature the vast majority of the costs DTE [Electric] puts forward are projected, or put another way, "speculative." It is then beyond the pale for DTE [Electric] to turn around and argue that the ALJ is doing something improper by trying to examine the costs put forward and whether, in the context of reasonableness and prudence, they are likely to actually be spent in the relevant timeframe.

Id., pp. 22-23. The Attorney General further contends that it is unclear what the company's actual gripe is with her briefing approach but states that it seems that the company takes issue with her citing to expert testimony without reproducing it all in briefs and instead incorporating the same by referring to the cite where it can be found as opposed to "clogging up a brief." *Id*., p. 24. The Attorney General states that the ALJ recognized and appreciates this approach, an approach that the company's exceptions do not follow since "the voluminous repetition of record materials has led to exceptions [from DTE Electric] that exceed 250 pages." *Id*.

The Commission finds the ALJ's recommended disallowance of projected expenditures to be well-reasoned and supported by the record and accordingly adopts the ALJ's findings and conclusion on this issue.[24] As noted in the PFD, should DTE Electric proceed with this and other projects not authorized for inclusion in rate base, "it can seek cost recovery at a later date." PFD, p. 140.

2. Plant Wireless Project (Schedule B5.3, Page 3, Line 41)

DTE Electric included $6.135 million in projected expenditures for this project during the 10-month bridge period and test year. Due to lack of support, the Attorney General recommended that these expenditures be removed. 8 Tr 4797-4798; Attorney General's initial brief, pp. 65-66; Attorney General's reply brief, p. 11. DTE Electric disagreed. 7 Tr 2582; DTE Electric's initial brief, pp. 43-45; DTE Electric's reply brief, p. 25.

The ALJ concluded that DTE Electric failed to support its projected expenditures for this project in this case. PFD, p. 139. The ALJ stated:

> DTE [Electric]'s frustration with the number of discovery questions it must respond to does not justify a slapdash or hasty response. The Attorney General is not required to seek out additional information in support of the company's expense projections. Nonetheless, the Attorney General asked for an explanation "what is being done with the plant wireless that will require $6.1 million from 2022 to the end of the projected test year." The response in pages 5-6 of Exhibit AG-1.20 stated that the projected costs are reasonable and prudent, that the "projected costs, scope and schedule for the plant wireless system were provided in the Attachment 9 of Part III," and provided examples to show that performing work at nuclear power plant involves unique considerations. Since DTE [Electric] failed to establish that the Attachment 9 Mr. Davis referenced was other than as Mr. Coppola described it, DTE [Electric] has failed to show what this project entails, the necessity to undertake the project at this time, how the projected costs were determined, or why they are reasonable. Assuming DTE [Electric] does proceed with this project,

[24] Appendix E to the PFD failed to reflect the ALJ's recommended disallowance as set forth in the PFD. PFD, p. 137. Since adopted, the Commission thus updates this disallowance amount of $7.205 million for this project through this order and for purposes of determining the company's revenue requirements.

> e.g. by seeking a competitive bid as Mr. Davis indicated, it can seek cost recovery at a later date.

PFD, pp. 139-140.

DTE Electric disagrees and asserts that, contrary to the ALJ's conclusion, the expenditures are supported by the evidence as illustrated by the PFD and company testimony. DTE Electric's exceptions, p. 41 (referencing PFD, p. 139; 7 Tr 2580-2582). The company also objects to the ALJ's characterization of discovery responses as being insufficient, slapdash, or hasty and asserts that it should not be criticized for compliance. DTE Electric's exceptions, pp. 41-42.

The Attorney General responds and argues that the ALJ's analysis and discussion on this issue are substantial and well-supported and that the ALJ's conclusions and recommendations should be adopted. Attorney General's replies to exceptions, p. 21. The Attorney General further asserts that there is nothing new in the company's exceptions that was not provided in testimony and rebuttal and that, accordingly, the ALJ's disallowance recommendation should be adopted. The Attorney General additionally states that she "appreciates the [ALJ]'s recognition that [the Attorney General] went out of her way to seek out additional information and that, despite that, DTE [Electric] still failed to support its proposed expenses." *Id*., pp. 24-25.

The Commission finds the ALJ's recommended disallowance of projected expenditures to be well-reasoned and supported by the record and accordingly adopts the ALJ's findings and conclusion on this issue.[25] If the company sufficiently supports this expenditure in a future proceeding, cost recovery may be sought at that time.

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[25] Appendix E to the PFD failed to reflect the ALJ's recommended disallowance as set forth in the PFD. PFD, p. 139. Since adopted, the Commission thus updates this disallowance amount of $6.135 million for this project through this order and for purposes of determining the company's revenue requirements.

3. Security System Computer Project (Schedule B5.3, Page 3, Line 50)

DTE Electric included $24.738 million in projected expenditures for this project during the bridge period and test year. Per DTE Electric:

> The purpose of this major plant security system that includes computer servers, video cameras and other detection devices is to alert plant security of security risks and to maintain positive surveillance of the Fermi 2 Power Plant; loss of the plant's security video system would necessitate compensatory measures to ensure the physical security of the Fermi 2 site. Just like any computer, periodic replacement is necessary to address aging and obsolescence of this key digital asset. DTE Electric expects the replacement of the nearly twenty-year-old security system to [be] complete in 2023.

7 Tr 2542-2543. The Attorney General objected for lack of support and asserted that, "[w]ith regard to the challenges of working within a nuclear facility, those challenges in and of themselves do not provide evidence to spend $24.7 million on this project." 8 Tr 4799 (referencing Exhibit AG-1.20). DTE Electric rebutted. 7 Tr 2582; DTE Electric's initial brief, pp. 43-45; DTE Electric's reply brief, p. 25.

The ALJ again found testimony on behalf of the Attorney General persuasive and noted that there is no evidence that DTE Electric obtained a competitive bid for this project. PFD, p. 141.

DTE Electric disagrees and maintains that the record supports its requested cost recovery. DTE Electric's exceptions, p. 42 (referencing Exhibit AG-1.20). The company argues that the ALJ "appears to merely accept without challenge [Attorney General] Witness Coppola's *one sentence* dismissive summary of these explanations of the complexity of the security computer system [set forth above in exceptions]." DTE Electric's exceptions, p. 43 (referencing PFD, pp. 140-141; 8 Tr 4799) (emphasis in original). DTE Electric contends that a more balanced analysis demonstrates the reasonable conclusion that the security computer system at Fermi 2:

> is a very important high-tech system that requires strict design controls which increases cost, high security which slows down construction, increases complexity and increases cost, hand excavation which slows down construction and increases

> cost, and covers hundreds of acres, multiple buildings, and virtually every possible means of access which increases cost.

DTE Electric's exceptions, pp. 43-44. The company continues:

> The [ALJ] also appears to have misconstrued Mr. Davis's rebuttal testimony that: *"Again, DTE Electric's Attachment 9 of Part III includes detailed monthly expenditures by cost element for the Security System Computer project. Furthermore, in response to the Attorney General's discovery requests, DTE Electric did demonstrate the use of competitive bids for the Security System Computer project[.]"* (7 [Tr] 2582). The Attorney General's own Confidential Exhibit AG 1.67 contained twenty six (26) pages of material associated with the Company's commercial efforts regarding the Plant Wireless Project, Plant Radio System, and Security System Computer Project. Pages 5, 10-11, and 24 specifically provide bidder score cards with criteria and scores. Page 24 is the bidder scorecard with respect to the Security System Computer project. Therefore, for the reasons discussed, the [ALJ]'s proposed disallowance is based on factually erroneous conclusions and should be rejected.

DTE Electric's exceptions, p. 44 (emphasis in original).

The Attorney General responds and argues that the ALJ's analysis and discussion on this issue are substantial and well-supported and that the ALJ's conclusions and recommendations should be adopted. Attorney General's replies to exceptions, p. 21. The Attorney General further asserts that, while it is certainly true that the security system at a nuclear plan is an important, high-tech system, "the problem, as the ALJ recognizes, is that DTE [Electric] has not come close to supporting these costs. As the ALJ found, DTE [Electric] did not support that it obtained a competitive bid for this project such that almost $25 million is a reasonable and supported expenditure." *Id*., p. 25. The Attorney General accordingly argues that the Commission should reject the company's exceptions and adopt her and the ALJ's conclusions and recommendations to disallow projected expenses for this project, along with the other two nuclear projects above. *Id*.

The Commission finds the ALJ's recommended disallowance of projected expenditures to be well-reasoned and supported by the record and accordingly adopts the ALJ's findings and conclusion on this issue.[26] Although, in this section, the Commission declines to approve the projected expenditures for the proposed projects at the company's Fermi 2 nuclear power plant, the Commission reiterates its support for justified investments that help to ensure the safe, reliable, and secure operation of the state's fleet of nuclear power plants and once again notes that if the company sufficiently supports these expenditures in a future proceeding, cost recovery may be sought at that time.

D. Distribution System

1. Base Capital (Exhibit A-12, Schedule B5.4, Page 1, Lines 1-17)

a. Emergent Replacements (B5.4, Page 1, Lines 2-7)

DTE Electric included approximately $1.3 billion in projected expenditures for emergent replacements which are, per the company, capital investments "necessitated by damage or failure on the system and [are] reactive, rather than proactive, but nonetheless essential to maintain and increase reliability." 4 Tr 233. The Staff, ABATE, and the Attorney General objected for various reasons including the company's change in projection method for this cost category from a five-year average to a three-year average, some mischaracterizations of costs in this cost category that should rather be assigned elsewhere, and concerns over inflation adjustments. 8 Tr 3035-3037, 4751, 5400-5405; Exhibit AB-10, p. 2; Exhibit S-15.0, line 7; Staff's initial brief, pp. 22-24; ABATE's initial brief, pp. 49-51. DTE Electric rebutted. 4 Tr 489-493 (citing 4 Tr 248, 360; Exhibit A-41, Schedule FF15); DTE Electric's initial brief, pp. 46-48.

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[26] Appendix E to the PFD failed to reflect the ALJ's recommended disallowance as set forth in the PFD. PFD, p. 141. Since adopted, the Commission thus updates this disallowance amount of $24.738 million for this project through this order and for purposes of determining the company's revenue requirements.

The ALJ found that the five-year average should continue to be used for this cost category, with the inflationary/normalization method previously approved by the Commission, and thus concluded that the Staff's adjustment of $91.957 million should be adopted. PFD, pp. 150-151, Appendix E, line 27, column (c). With this, the ALJ noted the company's acknowledgement that weather is highly variable from year-to-year and found that DTE Electric had not established that a three-year average would be more accurate. The ALJ found the Staff's testimony persuasive that consistent use of the five-year average method should adequately protect the company's interests, in contrast to a significant over-projection by relying on a smaller sample of two years of extreme weather that will not adequately protect ratepayers. The ALJ further recommended, acknowledging ABATE's concern about the use of inflation, that DTE Electric be required to present further evidence in its next rate case on the effect of significant capital investments over recent years that may have possible productivity benefits that "offset or partially offset inflationary pressures, such that it is not accurate to say that an inflationary adjustment to historical data reflects that it would cost more in today's dollars to do the same work." *Id*., p. 151. The ALJ also found it necessary to address the company's "efforts to blame rate case underprojections of emergent capital spending for its failure to spend strategic capital as approved in the same rate cases." *Id*., p. 152. Per the ALJ:

> DTE [Electric] has an obligation to raise capital for its needs. In addition to projecting rate base additions in advance of expenditures, rates include working capital allowances and a line of short-term debt, which should be sufficient to provide the company with the short-term capital needed between rate cases. Moreover, as [DTE Electric witness] Ms. Uzenski's testimony regarding historical results shows, the higher storm rate in 2020 was also associated with above-normal temperatures and higher revenues to DTE [Electric] on a non-weather-normalized basis. While DTE [Electric] bears the risk associated with weather that varies from the normal weather assumed in rate cases, it also bears the risk of higher storm activity. One benefit may offset a detriment of such risks, but these risks explain in part why DTE [Electric]'s authorized return on equity is significantly above the risk-free rate. [DTE Electric witness] Ms. Pfeuffer's testimony as discussed below

> regarding strategic capital, contrary to DTE [Electric]'s claims, asserts that the company has devised a management strategy to fulfill its strategic capital plans even with greater than projected storm activity. In a related discussion, Staff responded in its reply brief to DTE [Electric]'s assertion that reliability would suffer if its strategic capital projections are not adopted . . . .

PFD, p. 152 (footnote omitted; referencing Staff's reply brief, p. 9).

DTE Electric agrees with the ALJ's recommendation that normalization should continue but disagrees with the ALJ's recommended five-year average, as it argues that the record reflects that a three-year average is a better predictor of future emergent replacement costs. DTE Electric's exceptions, p. 47. Further, as set forth by the company, "[i]f the Commission believes that more severe weather will now predominate, then a three-year average will be a better predictor of future expenses and system requirements." *Id*., pp. 47-48. DTE Electric additionally objects to the ALJ's added comments which do "not properly characterize the Company's spending and the effects of weather." *Id*., p. 48 (referencing PFD, p. 152). DTE Electric states:

> Overall, the Company invested $44.0 million more in 2020 than it forecast in Case No. U-20561 (approximately 5%). The difference was primarily due to higher-than-projected Emergent Replacements (restoration of customer outages due to storm or equipment failure and hazard remediation), which were approximately $96.5 million more than the forecast. These expenditures were necessary to restore safe and reliable service to customers, and were reasonably and prudently incurred, so they should be approved. When weather events cause outages for customers, the Company must respond as quickly and safely as possible to restore electrical service. This often requires a shifting of priorities in investments, equipment, and labor, from previously planned activities to emergency restoration efforts. Replacing old, outdated equipment with higher-standard equipment (such as poles rated to a higher class or fiberglass crossarms instead of wooden crossarms) also increases restoration costs but results in a grid that is more robust to severe weather (Pfeuffer, 4 [Tr] 242-243, 246, 249-252).

DTE Electric's exceptions, p. 48 (footnote omitted).

In response, ABATE asserts that the Commission should reject the company's exception and proposals and instead adopt the recommendations set out by ABATE in its initial brief. ABATE reiterates that it and other parties explained, contrary to the company's belief otherwise in support of the three-year average proposal, that "weather variability counsels against a truncated period for projecting these costs." ABATE's replies to exceptions, p. 9 (referencing ABATE's initial brief, pp. 49-50; Attorney General's initial brief, pp. 42-43; Staff's initial brief, pp. 22-24, 273-275). ABATE argues that DTE Electric provided no evidence that a three-year average based on weather from 2018 through 2020 will provide a more accurate forecast for expenditures in 2022 and 2023 than a longer period, notes that the company expects that expenditures will be reduced for emergent replacements as a result of improved reliability driven by strategic investments and a tree trimming surge, and asserts that the company's proposal to shift resources is unreasonable and concerning. ABATE's replies to exceptions, p. 9 (referencing 8 Tr 246-247, 286).

Also responding, the Staff argues that DTE Electric's exceptions lose sight of the May 8 order and fail to address the relationship between emergent replacements and strategic capital investments. In more detail, the Staff contends that it is important for the Commission to consider its expectation from the May 8 order, noting that the company has not spent approved strategic capital amounts following that order and that the company suggests shifting is allowed. Staff's replies to exceptions, p. 36 (referencing May 8 order, p. 91). Recapping, the Staff states:

> Staff's Initial Brief refers to the Order in [Case No.] U-20561 showing the Commission's expectations that emergent replacements and strategic capital should not be treated as a single entity, spending should not be shifted, and the Company will use the dollars approved in strategic capital. Staff's Initial Brief also shows how the Company failed to comply with expectations outlined by the Commission (Staff Initial Brief, pp[.] 24, 33.)

Staff's replies to exceptions, p. 36. Given this, the Staff argues that the Commission should adopt the emergent replacements and strategic capital disallowances recommended by it and the ALJ. *Id*.

The Attorney General also responds and argues that the ALJ's analysis and discussion on this issue are substantial and well-supported and that the ALJ's conclusions and recommendation should be adopted. Attorney General's replies to exceptions, p. 26. The Attorney General further asserts that the company's exceptions add nothing new to the discussion and should be rejected. Per the Attorney General, "[t]he [ALJ] properly found that a 5-year average adequately balances company and ratepayer interests and objectively incorporates more data. DTE [Electric]'s attempt to pick a range of years that better suits company interests should be rejected." *Id*.

The Commission agrees with, and finds appropriate, the ALJ's recommendation for the continued use of the five-year average in determining this category of expenditures, along with the inflationary adjustment to historical data, considering this record and increased climate variability over recent years. In the future, however, if authorized strategic capital expenditures are reasonably and prudently spent by the company, as opposed to underspent, the Commission would be open to reconsidering this method of averaging for determining capital expenditures for emergent replacements, including the use of weighed averages that place more value on expenditures in recent years. The Commission is also interested in, and finds appropriate, the ALJ's recommendation that DTE Electric be required to present further evidence in its next general rate case on the effect of the company's capital investments over recent years on productivity benefits and any continued need for inflationary adjustments to historical data in this cost category for emergent replacements in the future. PFD, p. 151. The Commission lastly reiterates that emergent replacements and strategic capital are two different investment categories with two separate intended purposes and two separate buckets of authorized expenditures that should not be treated as one.[27] In other words, shifting resources between emergent replacements and strategic capital should not be a normal course of action. May 8 order, p. 91.

[27] More on classification of emergent capital expense is discussed towards the very end of this order, in similar fashion as addressed in the PFD.

b. Relocations (B5.4, Page 1, Line 10)

DTE Electric included $82.2 million in projected expenditures for relocation projects, which includes capital investments required for the construction of the Gordie Howe International Bridge (GHIB) and work required to accommodate construction by the Michigan Department of Transportation (MDOT) on major highways in southeast Michigan. 4 Tr 374-375. The Staff recommended an adjustment of $414,000 to this cost category based on updated information for the GHIB project. 8 Tr 5405 (citing Exhibit S-15.3, p. 1; Exhibit S-15.0, line 10; Exhibit A-12, Schedule B5.4, p. 4., line 15); Staff's initial brief, p. 25. DTE Electric agreed with the adjustment. 4 Tr 503.

The ALJ acknowledged this agreed-to adjustment in the PFD. PFD, p. 153, Appendix E, line 28, column (c).

No exceptions were filed on this issue.

The Commission accepts the company and the Staff's resolution on this issue. 4 Tr 503; Staff's initial brief, p. 25.

c. Electric System Equipment (B5.4, Page 1, Line 11)

DTE Electric included $101.175 million in projected expenditures for this cost category, which includes "expenditures for meters, distribution transformers, large transformers and other equipment required for emergent replacements." 4 Tr 381. The Attorney General objected to the company's approach as it relates to major equipment within this cost category and reliance on elevated historical amounts in 2020 to develop projections and instead recommended a reduction of $12.98 million based on use of a five-year average, adjusted for inflation. 8 Tr 4751-4753; Exhibit AG-1.4; Attorney General's initial brief, pp. 43-44. DTE Electric rebutted. 4 Tr 499-502;

Exhibit A-41, Schedule FF16; DTE Electric's initial brief, pp. 48-49; DTE Electric's reply brief, p. 30.

The ALJ found the Attorney General's recommended five-year average to be the most reasonable approach, coupled with the company's normalization adjustment. PFD, p. 155. The ALJ thus recommended a reduction of $11.28 million for this major equipment subcategory. *Id*.

DTE Electric agrees with the ALJ's normalization adjustments but disagrees with the ALJ's five-year average recommendation to represent future expenditures here. DTE Electric states that this base capital program lacks significant volatility from year to year and that the Commission accepted the company's use of prior year actual expenditures plus inflation for this program in the May 8 order, a methodology which remains reasonable and prudent. DTE Electric's exceptions, pp. 49-50 (referencing 4 Tr 499-500). If, however, the Commission decides to change the methodology for this case, which DTE Electric asserts it should not, the company recommends a three-year historical average of expenditures from 2019-2021 plus inflation as set forth in Exhibit A-41, Schedule FF16. DTE Electric's exceptions, p. 50.

The Attorney General responds and states that her response, summarized above, for emergent replacements applies here too. The Attorney General asserts that "[she] and [the] ALJ are correct that a 5-year average is the appropriate metric to use for future expenditures. DTE [Electric]'s attempt to shorten the timeframe to one that is more advantageous to the company, as well as its repeat of testimony, should be rejected by the Commission." Attorney General's replies to exceptions, p. 26.

The Commission finds the ALJ's recommended disallowance to be well-reasoned and supported by the record and accordingly adopts the ALJ's findings and conclusion on this issue.[28]

d. Normal Retirement-Unit Changeouts and Improvement Blankets (B5.4, Page 1, Line 12)

DTE Electric included $78.779 million in projected expenditures for this cost category, which includes "[normal retirement-unit changeout (NRUC)] projects to perform scheduled work for replacement of equipment on the subtransmission and distribution systems, such as the replacement of pole top hardware determined to be at end-of-life (outside of emergent replacements and pole/PTMM [pole and pole top maintenance and modernization])," along with improvement blanket projects "focused on improving operating conditions to reduce the frequency and duration of outage cases such as, installing, replacing or removing fuses and automatic sectionalizing equipment, installing disconnect switches, and removing electrical facilities no longer in use." 4 Tr 381.

i. System Improvements (B5.4, Page 5, Line 28)

The Staff took issue with this subcategory of expenditures, specifically the $2 million added by DTE Electric in 2022 and 2023, since inflation was already applied to 2020 actual amounts. Exhibit S-15.3, p. 6; Staff's initial brief, pp. 26-27. DTE Electric rebutted. 4 Tr 502-503; DTE Electric's initial brief, p. 49; DTE Electric's reply brief, p. 31.

ii. Attorney General overall (B5.4, Page 5, Line 33)

The Attorney General also took issue with the company's cost projections raising concerns over volatility, reliance on 2020 costs, and use of a three-year average versus a five-year average.

[28] Line 29, column (c) of Appendix E to the PFD reflects a different disallowance amount than that set forth on page 155 of the PFD. Since adopting what is stated in the PFD, the Commission thus updates the disallowance amount for this major equipment subcategory to $11.28 million through this order.

8 Tr 4753-4755; Exhibit AG-1.4; Attorney General's initial brief, pp. 44-47. DTE Electric disagreed. 4 Tr 500; Exhibit A-41, Schedule FF16; DTE Electric's initial brief, pp. 48-49; DTE Electric's reply brief, p. 30.

iii. Recommendation

The ALJ agreed with the Attorney General and found DTE Electric's projection method to be flawed considering variability in this cost category from year to year. PFD, p. 159. The ALJ thus recommended that the Attorney General's adjustments be adopted, with the normalizing adjustments for the five-year average presented in company testimony, resulting in a reduction of \$6.23 million for the 10-month bridge period and \$7.66 million for the test year. *Id*., Appendix E, line 30, column (c). The ALJ also agreed with the Staff that DTE Electric failed to establish the additional \$2 million in annual spending, citing insufficient justification and inconsistencies set forth by the company in evidence. PFD, pp. 159-160 (citing 4 Tr 375).

DTE Electric agrees with the ALJ's normalization adjustments but disagrees with the ALJ's five-year average recommendation to represent future expenditures here. DTE Electric states that this base capital program lacks significant volatility from year to year and that the Commission accepted the company's use of prior year actual expenditures plus inflation for this program in the May 8 order, a methodology which remains reasonable and prudent. DTE Electric's exceptions, pp. 49-50 (referencing 4 Tr 499-500). If, however, the Commission decides to change the methodology for this case, which DTE Electric asserts it should not, the company recommends a three-year historical average of expenditures from 2019-2021 plus inflation as set forth in Exhibit A-41, Schedule FF16. DTE Electric also disagrees with the ALJ's conclusion that the Staff's analysis here is correct. Per the company, "it properly supported its request for increased cost recovery and explained the reasons for the cost increase," in that "the additional \$2.11 million was requested by regional planning engineers to address very real needs of customers, including reliability and power quality concerns" and that the company "will use this funding to be more quickly and locally responsive to customer concerns and complaints." DTE Electric's exceptions, pp. 50-51 (referencing 4 Tr 502-503). Thus, per the company:

> there are higher project costs because there are more projects. The [ALJ]'s rationale (that DTE [Electric] should somehow be locked into only being able to support higher costs per individual project, rather than higher project costs collectively) provides no sound basis for a decision, and disregards the evidence that the Company needs the additional funding to increase the number of small projects. Staff also did not disagree with the necessity of investments in this category as a whole, and the [ALJ] also does not make such a suggestion.

DTE Electric's exceptions, p. 51 (footnote omitted). DTE Electric therefore asserts that its requested cost recovery should be approved. *Id*.

In reply, the Staff reiterates the inconsistency in DTE Electric's request, along with the lack of documentation, and maintains that the lack of support for the $2 million per year demonstrates an overall lack of factual evidence to support the projected spend. Staff's replies to exceptions, p. 3 (referencing Staff's initial brief, p. 27). If the Commission accepts the company's exceptions, however, which the Staff advises against, the Staff asserts that the company "will still fall short of providing factual evidence to support the 2022 and 2023 investments." Staff's replies to exceptions, p. 3. The Staff thus argues that the Commission should adopt the capital disallowances it and the ALJ recommended, given the company's failure to support the increased spend as required by MCL 460.6a(1). *Id*.

Also responding, the Attorney General argues that, similar to emergent replacements above, she and the ALJ are correct that a five-year average is the appropriate metric to use for future expenditures. Attorney General's replies to exceptions, p. 26. Per the Attorney General, "DTE [Electric]'s attempt to shorten the timeframe to one that is more advantageous to the company, as well as its repeat of testimony, should be rejected by the Commission." *Id*. The Attorney General also argues that the Commission should reject the company's exception to the Staff's proposed disallowance, as the ALJ's analysis and conclusion are correct and the company's evidence does not adequately support the expense. As stated by the Attorney General, "DTE [Electric]'s repeat of its testimony does nothing to rebut the PFD and the Commission should rely upon Staff's and the ALJ's analysis." *Id*., p. 27.

The Commission finds the ALJ's recommended disallowance to be well-reasoned and supported by the record and accordingly adopts the ALJ's findings and conclusion on this issue.

e. General Plant, Tools, and Equipment (B5.4, Page 1, Line 13)

DTE Electric included $29.002 million in projected expenditures for this cost category. Similar to above, the Attorney General objected, raising concerns over volatility within the cost category and recommending the use of a five-year average, with inflation from 2021 but without normalizing adjustments to 2020 data prior to averaging. Attorney General's initial brief, pp. 47-48. DTE Electric disagreed. Exhibit A-41, Schedule FF16; DTE Electric's initial brief, pp. 48-49; DTE Electric's reply brief, p. 30.

Consistent with above, the ALJ concluded that a five-year average is the most reasonable approach, normalized for inflation as shown in Exhibit A-41, Schedule FF16. PFD, p. 161. The ALJ thus recommended a reduction of $2.39 million in projected expenditures for this cost category. *Id*.

DTE Electric agrees with the ALJ's normalization adjustments but disagrees with the ALJ's five-year average recommendation to represent future expenditures here.[29] DTE Electric states that this base capital program lacks significant volatility from year to year and that the Commission accepted the company's use of prior year actual expenditures plus inflation for this program in the May 8 order, a methodology which remains reasonable and prudent. DTE Electric's exceptions, pp. 49-50 (referencing 4 Tr 499-500). If, however, the Commission decides to change the methodology for this case, which DTE Electric asserts it should not, the company recommends a three-year historical average of expenditures from 2019-2021 plus inflation as set forth in Exhibit A-41, Schedule FF16. DTE Electric's exceptions, p. 50.

The Attorney General responds and again argues that, similar to emergent replacements above, she and the ALJ are correct that a five-year average is the appropriate metric to use for future expenditures. Attorney General's replies to exceptions, p. 26. Per the Attorney General, "DTE [Electric]'s attempt to shorten the timeframe to one that is more advantageous to the company, as well as its repeat of testimony, should be rejected by the Commission." *Id*.

The Commission finds the ALJ's recommended disallowance to be well-reasoned and supported by the record and accordingly adopts the ALJ's findings and conclusion on this issue.[30]

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[29] DTE Electric also notes a discrepancy between the narrative portion of the PFD here and the disallowance amount in Appendix E ($2.39 million versus $3.032 million). The company states that "[t]his and other inconsistencies throughout the DO [distribution operations] section of the PFD between the narrative and Appendix E creates a challenge when evaluating the ALJ's intent." DTE Electric's exceptions, p. 49, n. 48.

[30] Line 31, column (c) of Appendix E to the PFD reflects a different disallowance amount than that indicated on page 161 of the PFD. Since adopting what is stated in the PFD, the Commission thus updates the disallowance amount for this category of expenditures to $2.39 million through this order.

2. Strategic Capital (B5.4, Page 1, Lines 19-21)

a. General

DTE Electric explained that "Strategic Capital programs include work that the Company is performing to improve safety, reliability and operability, and grid modernization." DTE Electric's initial brief, p. 49. The company stated that, as set forth in Exhibit A-12, Schedule B5.4, page 12, there are three categories of investments: (1) infrastructure resilience and hardening, (2) infrastructure redesign and modernization, and (3) technology and automation. According to DTE Electric, the company's projected strategic capital expenditures are "[b]ased on the grid modernization no-regrets investments identified in the DGP [distribution grid plan] submitted September 30, 2021" in Case No. U-20147. 4 Tr 371.

DTE Electric noted that its 2020 historical strategic capital expenditures were $307.6 million, which is approximately $54.3 million less that the company projected for the same expense in Case No. U-20561. In the immediate case, the company projected $798 million for the test year, which is an increase of almost $500 million over 2020 actual expense. In total, for the bridge period and projected test year, DTE Electric proposed $1.75 billion in strategic capital expenditures. The company asserted that "Exhibit A-23 provides much greater detail for the projects and programs in Exhibit A-12, Schedule B5.4, which represents 100% of the Company['s] total forecasted capital." 4 Tr 386.

DTE Electric claimed that because of the COVID-19 pandemic and historic back-to-back severe weather events, spending in 2020 and 2021 does not demonstrate the company's ability to invest in strategic capital and should not be used as a benchmark. In addition, the company stated that to reduce outages and to improve the reliability and safety of the distribution grid, DTE Electric "plans to increase its strategic capital investments over time and will also continue to follow through on the Commission-approved major tree trimming initiative based on the updated standard, which is proven to reduce outages." 4 Tr 241.

In the Staff's opinion, DTE Electric has invested heavily in emergent replacements and failed to appropriately invest in strategic capital, which is contrary to the Commission's recommendations in the May 8 order. The Staff noted that DTE Electric projected strategic capital expenditures of approximately $380 million for 2020 and $422 million for 2021. However, the Staff argued that:

> The Company has yet to spend more than $360 million under the strategic program when it has projected and has been approved (in more recent years) to spend above these levels. This makes it difficult to believe that nearly $700 million (nearly double) will be spent in calendar year 2022 and over $800 million will be spent in calendar year 2023.

8 Tr 5408 (footnote omitted).

The Attorney General noted that the average annual growth rate for DTE Electric's spending on strategic capital programs from 2017 to 2021 is approximately 20%. She stated that:

> The 20% average annual increase in capital spending for this set of programs appears to be a more manageable and achievable level of activity than the doubling of the program spending proposed by the Company. As stated earlier, the Company's track record of not achieving the forecasted level in spending in two prior years, the challenges posed by the supply chain to obtain needed materials, and the ability to hire and train new employees or contractors over than [sic] next year makes the Company's projected capital spending speculative and unlikely to be achieved.

8 Tr 4760. In addition, the Attorney General asserted that DTE Electric failed to support several major strategic capital projects with sufficient detail, analysis, explanation, or justification. Therefore, after accounting for the 20% annual growth rate for capital spending, she recommended that the company's proposed strategic capital expenditures be reduced by $208.9 million for the 10 months ending October 2022 and $252 million for the projected test year. *See*, 8 Tr 4761.

The Attorney General stated that, if the Commission declines to approve her overall recommended disallowance for strategic capital programs, the Commission should disallow: (1) $17.3 million for strategic undergrounding pilots for the 10 months ending October 2022, and $36.8 million for strategic undergrounding pilots for the projected test year; and (2) $28.45 million for Advanced Distribution Management System (ADMS): Distribution Management System/Outage Management System (DMS/OMS) expenditures for the 10 months ending October 2022, and $12.43 million for ADMS: DMS/OMS expenditures for the projected test year. Furthermore, the Attorney General recommended that the Commission disallow $2.33 million for ADMS/Network Management System (ADMS/NMS) expenditures for the 10 months ending October 2022, $2.88 million for ADMS/NMS expenditures for the projected test year, and $20.5 million for Electric System Operations Center (ESOC) expenditures. *See*, 8 Tr 4764, 4766, 4770, 4773.

In response, DTE Electric objected to the Attorney General's method for calculating the annual increases in strategic capital, stating that: (1) her calculation employed arbitrary factors, (2) the company's present needs are different than historical needs, (3) the 2020 COVID-19 pandemic and severe storms in 2021 negatively impacted the company's ability to invest in capital, and (4) the Attorney General's focus on strategic capital investments "discount[s] the Company's total ability to execute capital investments." 4 Tr 418. Additionally, the company stated that it has plans to remedy any supply chain or workforce issues that would hinder its ability to execute strategic capital projects. *See*, 4 Tr 398. DTE Electric disagreed with the Staff's reliance on historical 2020 and 2021 strategic capital expenditures for similar reasons.

MNSC argued that "asset replacements should be based on the two core principles '*replacement upon failure*' (including incipient failure) and '*replacement upon imminent failure*' with respect to preemptive replacement." 8 Tr 3961 (emphasis in original) (footnotes omitted). Accordingly, MNSC asserted that the majority of asset replacements should be related to actual failure, not storm damage, and a smaller number of replacements should be related to signs of imminent failure. However, MNSC contended that DTE Electric's "replacement policy is more expansive, going well beyond preempting imminent failure. DTE [Electric] refers to its replacement approach as 'proactive' replacement." 8 Tr 3961-3962. MNSC expressed concern that, by replacing equipment that is not at risk of imminent failure, DTE Electric is needlessly increasing capital costs to a "staggering" level. 8 Tr 3963.

DTE Electric responded to MNSC that, although the company emphasizes replacing equipment instead of repairing it, DTE Electric does not require replacement and often leaves the decision of whether to repair or replace with line workers who are working in real-time conditions in the field. *See*, 4 Tr 498.

The ALJ noted that DTE Electric's proposed strategic capital expenditures represent a 94% increase over 2021 expenditure levels and an additional 17% increase for 2023. She stated that "DTE [Electric] is arguing that it needs to increase its rate base to reflect an approximately 36% annual growth rate over the period 2016 to 2023 in distribution system capital spending." PFD, p. 169. However, the ALJ found that DTE Electric failed to sufficiently support its claim that distribution system capital spending has grown 36% over the last five years, and she agreed with the Staff and the Attorney General that, based on actual expenditures between 2016 and 2021, the company has not demonstrated its ability to increase spending in this category to such levels. The ALJ stated that "specific recommendations made by the parties regarding various line items making up the company's total projections for this category are discussed in the following subsections." *Id.*, p. 172.

In exceptions, DTE Electric disagrees that it has chronically underspent strategic capital. The company notes that:

> While the Commission has indicated it would like the Company to meet strategic investment goals even when there is an overspend in emergent, this is not always possible. This is because it is not merely a question of dollars. The more pressing problem is the amount of finite human and physical resources. Take a simple example for instance: say the Company has prepared for 100 crews to dedicate their time to strategic work, but half of those crews are then required to respond to emergency outages instead, even after the Company brings in additional crews from outside the service territory. In this scenario there will only be 50 crews available to do the planned strategic work. Even with the dollars ready for investment, the Company's ability to actually spend the dollars is hampered by the reduction in the amount of available work crews. The Company is still paying for 100 crews (plus additional crews from outside the service territory), however, the dollars for half of the investment pull from the emergent bucket rather than the strategic bucket. Thus, it is a[n] oversimplification to say that the Company has a history of chronic underspending.

DTE Electric's exceptions, pp. 51-52. DTE Electric also reiterates that the COVID-19 pandemic hindered the company's ability to perform strategic work in 2020.

ABATE replies, asserting that the claims set forth in DTE Electric's exceptions demonstrate that the company's requests for strategic capital expenditure recovery are unreasonable. ABATE states that:

> The Commission should grant the Company the revenue it has demonstrated it will actually need, not the revenue it has suggested it would prefer. Furthermore, the Company's proposed spending on these programs includes significant levels of capital expenditures for projects that are not expected to be placed in service until after the end of the projected test year in this case. (See Exhibit A-12, Schedule B5.4, at 8-11.) These projects will not, therefore, become used and useful during the bridge period or projected test year in this case.

ABATE's replies to exceptions, p. 10.

On page 36 of its replies to exceptions, the Staff asserts that:

> The Company has not spent approved strategic capital amounts following the Order in [Case No.] U-20561 and suggests that shifting spending is allowed. Staff's Initial Brief refers to the Order in [Case No.] U-20561 showing the Commission's expectations that emergent replacements and strategic capital should not be treated

> as a single entity, spending should not be shifted, and the Company will use the dollars approved in strategic capital. Staff's Initial Brief also shows how the Company failed to comply with expectations outlined by the Commission (Staff Initial Brief, pp 24, 33.)

Accordingly, the Staff requests that the Commission adopt the ALJ's recommended disallowances.

Similarly, the Attorney General states that "DTE [Electric] creates a self-perpetuating cycle where it says it needs so much money for strategic capital, it gets approval from the Commission for those amounts, and then it fails to spend those amounts, blaming it on emergent capital and saying that it needs even larger sums for the strategic capital projects that it ignored." Attorney General's replies to exceptions, pp. 27-28. She contends that the ALJ is correct to question the company's ability to achieve its proposed capital spending.

The Commission continues to be concerned with the company's persistent inability to spend approved strategic capital amounts and the shifting of strategic capital to emergent capital. As stated in the May 8 order, when used appropriately, strategic capital strengthens infrastructure resilience and safety during unexpected emergencies which, in turn, can avoid the need to shift strategic capital to other categories of emergent spending. The Commission finds concerning the argument made by DTE Electric that high levels of storm activity have prevented strategic capital spend historically, as the company has stated elsewhere in its testimony that severe storm activity will not decrease in the future. However, the Commission declines to adopt the blanket reduction in overall spending proposed by the Attorney General in this category because strategic capital investment is necessary to prepare the system to better withstand the effects of these increasing storms. Individual line items within this category are discussed below.

Additionally, the Commission remains troubled over the continued reliability challenges of the company's distribution system, particularly when compared to the high cost of service. The Commission cannot stress enough its expectation that DTE Electric will invest the amounts approved for strategic capital improvements and not shift them to other categories such as emergent replacement and other reactive spending. As such, the Commission may be willing to consider a long-term investment recovery mechanism (similar to the Infrastructure Recovery Mechanism for the gas Main Renewal Program first approved in the April 16, 2013 order in Case No. U-16999) to ensure that the spending included in rates for strategic capital improvements—including the ultimate conversion of DTE Electric's distribution grid—is spent for these purposes, and to provide greater long-term certainty on recovery of reasonable and prudent costs related to these strategic distribution grid investments. The Commission expects that DTE Electric will include in any such proposal a full description of costs and benefits, as well as associated timelines.

b. Infrastructure Resilience and Hardening (B5.4, Page 1, Line 19)

DTE Electric asserted that the strategic capital investments for infrastructure resilience and hardening "are focused on replacing aging infrastructure, hardening the system, and addressing areas with known poor reliability." 4 Tr 277. According to Exhibit A-12, Schedule B5.4, page 1, DTE Electric is requesting projected test year expenditures of $346.1 million for this category, approximately double historical 2020 expenditures of $167 million.

The Staff recommended a 15% disallowance to DTE Electric's 2022 bridge period infrastructure resilience and hardening expenditures and to the company's projected test year expenditures for the same category, explaining that "[t]he 15% disallowance is the calculated average percent underspend in the subprogram each year from 2020-2021." 8 Tr 5410. Moreover, the Staff stated that "[t]he Company has failed to demonstrate its ability to spend at projected levels and placing these aggressive 2022 and 2023 projected spend levels into customer rates with a track record of underspend is not appropriate when customers are not historically receiving the benefits they are paying for." 8 Tr 5410; *see also*, Staff's initial brief, pp. 32-34.

The Attorney General did not address this program specifically but provided a general observation that DTE Electric's "proposed [strategic capital] spending for 2022 and 2023 represents a dramatic escalation in each of the subprograms within this major program." 8 Tr 4757. Thus, the Attorney General recommended that the Commission approve spending for the subprograms in the strategic capital expenditure category to reflect the 20% growth rate, which is discussed above.

DTE Electric disagreed with the Staff, asserting that infrastructure resilience and hardening expenditures should be computed using "a dollar-weighted basis, by calculating the total summed investment and deriving the percentage over/underinvestment based on total investments." 4 Tr 407. The company argued that the Staff's method for calculating an average percent spend "ignores the impact of the relative size of the projects" and skews the results. 4 Tr 408. In addition, DTE Electric reiterates the arguments set forth in the sections above, asserting that the Staff's approach fails to consider the unique challenges of 2020 and 2021 and that the company has plans to improve capital spending. *See*, DTE Electric's initial brief, pp. 56, 61.

The ALJ found the Staff's proposal to be reasonable. She stated that:

> Staff's analysis does not unduly weight small projection errors, but instead, Staff has looked at the projections the company has made for the entire subcategory of infrastructure resilience and hardening. It is appropriate to consider the percentage overprojections from year to year, rather than looking at overall average over multiple years. Even looking at these numbers on an overall average basis, the result is still approximately a 15% overprojection.

PFD, p. 177 (footnote omitted). The ALJ recommended that the Commission adopt the Staff's proposed 15% reduction to the company's infrastructure resilience and hardening capital expenditures.

In exceptions, DTE Electric states that "it appears that the [ALJ] recommends not adopting the [Attorney General]'s proposal. The Company agrees with that outcome. To the extent anything remains of the [Attorney General]'s proposal, including the suggestion that it is a 'reasonable recommendation,' the Company takes exception for the reasons discussed below." DTE Electric's exceptions, p. 54. DTE Electric objects to the Staff's (and the Attorney General's) methodology that relies on an average of percentages spent on projects, reiterating the arguments set forth in testimony and briefs. *See*, DTE Electric's exceptions, pp. 55-57. The company states that:

> if the proposed disallowances of strategic capital investments were to be adopted, then there would be negative impacts on safety, reliability, and emergent costs, including (1) degradation of the system and increased equipment failures; (2) difficulty supporting economic development and customer growth, as overloaded circuits would not be addressed (further damaging equipment) and needed capacity would not be added; (3) the system would be less resilient to intense weather events; and (4) the system would not have the infrastructure or the technology to support further penetration of DER [distributed energy resources] and EVs [electric vehicles] (Pfeuffer, 4T 287).

DTE Electric's exceptions, p. 58. Accordingly, the company requests that the Commission reject the 15% disallowance recommended in the PFD.

On page 28 of her replies to exceptions, the Attorney General continues to recommend that the Commission "adopt her proposed limit on overall projected spending increases of 20%, but at a minimum the Commission should reject DTE [Electric]'s exception and adopt the ALJ's recommendation."

For the infrastructure resilience and hardening capital expenditures, the Commission finds that the ALJ's findings and recommendation are persuasive and should be adopted. DTE Electric proposed 22-month bridge year capital expenditures for this program of $455 million, which are more than 2.5 times the amount the company spent on the program in 2020. *See*, Exhibit A-12, Schedule B5.4, p. 1. For the projected test year, DTE Electric proposed capital expenditures of $346.1 million, more than twice the amount spent in 2020. *Id*.

The Commission notes that in Case No. U-20561, the company forecasted 2020 spending of $184.9 million for this program but spent only $167 million. *See*, 4 Tr 243, Table 6. The Commission acknowledges that there were challenges associated with the COVID-19 pandemic and, therefore, the approximate $18 million disparity between the 2020 forecast and actual spending on the program in 2020 may be explicable. However, DTE Electric did not explain how the infrastructure resilience and hardening program proposed in the immediate case differs from the program proposed in Case No. U-20561 that would justify more than double the spending in 2022 and 2023. Although the Commission supports the focus and goals of this program, DTE Electric has yet to demonstrate that it is capable of spending capital even approaching the levels proposed for 2022 and 2023 as set forth in Exhibit A-12, Schedule B5.4, page 1, line 19. Indeed, DTE Electric's own exceptions state that it "is not always possible . . . to meet strategic investment goals . . . when there is an overspend in emergent [capital]." DTE Electric's exceptions, p. 51. As such, until DTE Electric demonstrates its ability to actually spend the dollars authorized for strategic capital, the Commission remains unpersuaded that allowing for the full amounts sought by the company to be included in rates is reasonable. In the meantime, the Commission notes that the company has the ability to spend above the level of capital approved in this case and may recover the amount in a future rate case after the spend is proven to be reasonable and prudent.

c. 4.8 Kilovolt Hardening (B5.4, Page 8, Line 9)

According to DTE Electric, the company developed the 4.8 kilovolt (kV) hardening program to replace the aging 4.8kV system. DTE Electric stated that it prioritizes circuits to be hardened using "specific criteria, with safety being the primary driver in the prioritization efforts."

4 Tr 292. The company also explained that "the initial purpose of the 4.8kV hardening program" was to respond to the Commission's directive in Case No. U-18484, "which ordered the Company to work with relevant entities to accomplish a long-term comprehensive plan to address DPLD [Detroit Public Lighting Department] owned arc wire." 4 Tr 423-424.

DTE Electric stated that, "[b]etween 2018 and 2020 the Company increased the miles hardened by approximately 100% annually. In 2022 the Company expects another significant increase, almost 80%, in annual miles hardened. The Company expects to harden close to 1,600 miles over the next five years." 4 Tr 293. DTE Electric asserted that the hardening program is expected to last 10 years, and the company plans to harden over 2,200 miles and 85% of the city of Detroit. The company averred that the hardening program is a cost-effective method for improving safety and reliability.

MNSC contended that the 4.8kV hardening program is an example of DTE Electric's proactive replacement policy that is needlessly increasing distribution system capital costs. MNSC explained that:

> A striking example of proactive replacement is the replacing of all wooden crossarms with fiberglass crossarms in a circuit, as in DTE [Electric]'s 4.8kV Hardening program. Just because a crossarm is constructed of wood does not mean it is at risk of imminent failure. The proactive replacement of wooden crossarms has a multiplying effect on asset replacements in light of the fact that all the pole top equipment attached to the cross arm is then replaced. Another example is that old ceramic insulators are replaced with polymer insulators. Although polymer insulators may have greater durability characteristics over ceramic insulators, ceramic insulators do not have a design defect on the basis of being made of ceramic material, nor are they at risk of imminent failure just because they are old.

8 Tr 3962 (footnote omitted). Furthermore, MNSC argued that DTE Electric did not show that the wooden cross arms are failing or causing significant outages. *See*, 8 Tr 3978-3981.

In MNSC's opinion, "[t]he Company justifies its hardening investment in part by reference to [a] '[Commission] requirement' for the Company to remove DPLD arc wire, referencing Case

No. U-18484." MNSC's initial brief, p. 39 (quoting 4 Tr 426) (footnote omitted). However, MNSC asserted that, in Case No. U-18484, the Commission did not order DTE Electric to remove arc wire; thus, the Commission should not approve increased capital expenditures for work that was not meant to be the primary driver of the program. MNSC averred that "[t]he Company must demonstrate that hardening is a cost-effective way to maintain the distribution system to prevent safety risks, including downed wires – arc or otherwise. Removing arc wire may be a benefit of hardening, but it does not convert hardening into a reasonable and prudent ratepayer investment." MNSC's initial brief, p. 43.

Moreover, MNSC asserted that the company failed to demonstrate that preemptive repairs through its hardening program are more cost effective than increased tree trimming or acceleration of the conversion program. Therefore, MNSC requested that the Commission disallow DTE Electric's proposed increased expenditures for this program "and instead maintain the level of annual spending as in 2021." 8 Tr 3984.

DTE Electric responded, asserting that "the Company performed an analysis in Case No. U-20162, [4 Tr] 729-730, that found the scope of work in the 4.8kV Hardening program to be the most cost-effective way to address safety and reliability in the city of Detroit." 4 Tr 423. The company also asserted that much of the 2,200 line miles in the 4.8kV hardening program "overlap communities which have a high MiEJScreen score"[31] and, therefore, the program has been included in DTE Electric's formal environmental justice plan to improve safety and reliability in impacted communities. 4 Tr 425. The company averred that, currently, it has hardened over 600

[31] MiEJScreen, short for Michigan environmental justice screen, is "an interactive mapping tool that identifies Michigan communities that may be disproportionately impacted by environmental hazards." *See*, https://www.michigan.gov/egle/maps-data/miejscreen (accessed November 18, 2022).

miles, which, according to DTE Electric, has the demonstrated benefit of arc wire removal and improved safety and reliability.

Finally, DTE Electric objected to MNSC's claim that tree trimming or conversion would be more effective than hardening. The company cited a table provided by MNSC that demonstrates that hardening, compared to tree trimming, is "equally successful at improving All-Weather SAIFI [system average interruption frequency index], and approximately 47% better at reducing SAIDI [system average interruption duration index] ex-MEDs [major event days], and approximately 56% better at reducing wire downs . . . ." 4 Tr 427. DTE Electric contended that tree trimming alone will not improve the safety and reliability of the system and that the 4.8kV hardening program is necessary to accomplish these goals.

The Staff noted that, according to DTE Electric's 2021 DGP, "[t]he scenarios developed through the grid modernization process, specifically the electrification and distributed generation scenarios, identified the potential need to convert the 4.8kV system to a higher voltage at an accelerated pace." Exhibit A-23, Schedule M1, p. 488; *see also*, 8 Tr 5251. However, the Staff asserted that DTE Electric's plan for full conversion may not be complete for multiple decades and it does not include a full analysis of the alternatives to conversion or the costs of conversion. The Staff explained that:

> The Company analyzed limited alternatives before proposing to harden the 4.8kV system instead of replacing it. In the City of Detroit, 4.8kV system conversion is projected to cost over $4 billion dollars and over a decade to replace. Full conversion of the Company's 4.8kV system is estimated to be over $30 billion and require multiple decades. Though the Company determined the 4.8kV hardening program provides safety and reliability improvements at a faster pace and more affordable cost than alternatives, the alternatives it considered were severely limited. These were to "do nothing and allow the system to deteriorate" or take decades to convert the 4.8kV system before communities experience any widespread increases in system reliability. With the increasing use of DERs such as solar, storage, energy efficiency, and microgrids, there may be alternatives to the 4.8kV hardening program beyond the two the Company considered.

8 Tr 5252 (quoting Exhibit S-7.51, pp. 16-17) (footnotes omitted). In addition, the Staff contended that DTE Electric claimed that it must first complete the hardening program before it can provide an estimate of the cost to convert the 4.8kV system. The Staff argued that "[i]f the Company's estimated cost to convert the 4.8kV system includes the cost to first harden it, as well as to implement overhead fiber trunks and backbones to 4.8kV substations, the cost may be higher than converting the 4.8kV system expeditiously without such efforts. A detailed analysis would be required to confirm." 8 Tr 5252-5253. The Staff recommended that the Commission direct DTE Electric to work with the Staff and intervenors to develop a more complete analysis of alternatives to the 4.8kV system and to evaluate how investment in infrastructure will impact communities, particularly by using socioeconomic data as part of the analysis.

The Staff also expressed concern that if DTE Electric employs a lengthy conversion to a higher voltage system, customers served by the 4.8kV system may be unable to timely participate, or will experience significant limitations, in clean energy technologies such as EVs, solar generation, and energy storage. The Staff explained that:

> Communities served by 4.8kV are plagued by the highest trouble in the DTE Electric system, yet the very system that causes the increased trouble is also the one that limits their ability to seek solutions. The 4.8kV system constrains not only much needed reliability and resiliency solutions, like solar and storage. It also constrains electrification benefits. The Company touts the environmental benefits from EVs, which emits 55% less greenhouse gases than a traditional gasoline vehicle in Michigan per year, as one justification of its EV program. In a study of 53 metropolitan statistical areas in the U.S., Detroit had the 16th highest estimated benefit from replacing internal combustion engine (ICE) vehicles with EVs.

8 Tr 5250 (footnotes omitted). The Staff noted that, pursuant to DTE Electric's plan, some circuits and substations may not be converted to a higher voltage for 15 years or more and that full conversion may take multiple decades, which will keep some communities in DTE Electric's service area in an environmentally and technologically disadvantaged situation.

Like the Staff, the DAAOs objected to DTE Electric's 4.8kV hardening program, arguing that the "program will delay conversion of these circuits to 13.2 kV, leaving the predominantly low-income communities in Detroit, Highland Park, Hamtramck, and suburban and rural Michigan with sub-par infrastructure for multiple decades." 8 Tr 4308. And, similar to the Staff, the DAAOs noted some limitations of the 4.8kV system, stating that customers may not be able to add distributed generation (DG), DG storage, or EV charging. Furthermore, the DAAOs asserted that it is possible that much of the reliability and safety benefits touted by DTE Electric have been the result of tree trimming and not the hardening program itself. Therefore, the DAAOs requested that the Commission:

> Reject DTE [Electric]'s 4.8kV Hardening Plan as written and require DTE [Electric] to return with (1) a plan that has an accelerated timeline for converting all of the 4.8 kV to 13.2 kV, (2) an analysis that demonstrate[s] equity in terms of access to emerging technology and service quality, and (3) appropriate, substantial compensatory mechanisms to address gaps in service quality.

8 Tr 4329.

Responding to the Staff and the DAAOs, DTE Electric partially acknowledged their concerns, stating that there are some areas of the 4.8kV system that are not compatible with DG hosting capacity. However, the company contended that "[m]ost areas of the 4.8kV system currently have sufficient capacity to incorporate EVs and additional DERs. Conversion projects currently take place in areas that have capacity limitations. Future planning and analysis efforts will help determine when the areas of the 4.8kV will need to be converted to meet projected grid needs." 4 Tr 509.

DTE Electric disagreed with the DAAOs' method for calculating hosting capacity on 13.2kV circuits compared to 4.8kV circuits. The company asserted that because "13.2kV circuits have approximately three times the number of customers as 4.8kV circuits, the Hosting Capacities must be normalized by customer count to ensure an equivalent comparison," and, therefore, "the discrepancy between the two voltages is approximately three times, not the original seven times that [the DAAOs'] Witness Koeppel discussed in testimony." 4 Tr 519-520. Moreover, DTE Electric disputed the Staff's and the DAAOs' claim that the timing of the hardening program is delaying conversion. The company argued that there is no delay and that the timing of the conversion program is affected by capacity constraints on the distribution system.

DTE Electric also addressed the Staff's and the DAAOs' claims that the company should be using socioeconomic data and the MiEJScreen tool to determine electric distribution grid investments. The company asserted that the Michigan Department of Environment, Great Lakes, and Energy's (EGLE's) MiEJScreen "tool is still in draft form," but DTE Electric expects that when the final version is available, it "will likely show that parts of Detroit and some communities near Detroit will be identified as communities" that need further review as part of the company's environmental justice plan in DTE Electric's DGP. 4 Tr 510-511. In response to the DAAOs', MNSC's, and the CEOs' concerns about low-income households in DTE Electric's service territory who experience affordability, reliability, and environmental health issues, the company stated that it:

> expects that its formal approach to EJ [environmental justice] will continue to evolve in future cases, in no small part due to the final publication of the MiEJScreen and review of distribution investments and grid planning processes. Although the formal Distribution EJ Plan has not yet been developed, there are today programs targeted at what in the future will likely be identified as MiEJScreen impacted communities and in particular Detroit. Programs and projects [the company] would highlight include:
>
> - 4.8kV hardening program
> - Tree Trimming
> - The CODI [city of Detroit infrastructure] Detroit Infrastructure program
> - Commitment to convert all of the 4.8kV system, in the 2021 DGP
> - Currently planned conversions, many of which are in Detroit

- NWA [non-wires alternative] batteries at O'Shea – first DTE [Electric] urban solar park will soon have DTE [Electric]'s first urban batteries.

4 Tr 517-518. DTE Electric also noted that it "intends to develop and then file a distribution-related EJ plan in either the next Distribution Grid Plan or Rate Case." 4 Tr 516.

The ALJ recommended that the Commission adopt MNSC's proposal to limit DTE Electric's hardening program expenditures to 2021 levels. She noted that the company's analysis did not adequately consider tree trimming: "there is no data showing how the untrimmed circuits in DTE [Electric]'s tree-trimming study compared to the untrimmed circuits in the hardening control group, most of which had not been trimmed for at least 7 years prior to the hardening, with additional time before the data was taken." PFD, p. 193. In addition, the ALJ stated that, although it is not dispositive regarding the merits of the hardening program, MNSC's claim that the Commission did not order DTE Electric to remove arc wire in Case No. U-18484 is well supported.

Finally, the ALJ recommended that the Commission adopt the Staff's proposal that DTE Electric be directed to analyze alternatives to convert the circuits. The ALJ noted that "a collaborative or other forum would be a preferable approach to explore options outside of the constraints of a 10-month rate case, which DTE [Electric] could file within 2 months of a Commission order in this case with little time for the anticipated analysis." *Id*., p. 194.

In exceptions, DTE Electric disputes the ALJ's finding and MNSC's claim that, in Case No. U-18484, the Commission did not direct the company to remove arc wire. Rather, DTE Electric asserts that, in two cases, the Commission has ordered the company to address dangerous arc wire. DTE Electric contends that, in Case No. U-18172, the Commission ordered the company and the Staff to work together to investigate a downed arc wire accident and to provide a plan to remedy similar circumstances. The company notes that the Staff filed a report in Case

No. U-18172 stating that "'[o]nly the future removal of the arc wire will entirely eliminate the safety threat posed by the arc wire system to the residents of the City of Detroit." DTE Electric's exceptions, p. 61 (quoting the November 23, 2016 Staff Summary Plan Report in Case No. U-18172, filing #U-18172-0005, p. 7). DTE Electric contends that, in response, it commenced two pilots to remove the arc wire, wherein "it was determined that rebalancing of cross-arms and/or replacement of crossarms was necessary following removal of arc-wire." DTE Electric's exceptions, p. 61.

Next, the company asserts, the Commission issued an order in Case No. U-18172 closing the investigation and stating that "out-of-service arc wire presents a potential safety hazard to the residents of Detroit." *Id*. (quoting December 7, 2017 order in Case No. U-18172, p. 6). DTE Electric notes that on the date the investigation was closed in Case No. U-18172, the Commission issued an order in Case No. U-18484 stating that, although it is not a "directive to remove arc wire," the Commission expects that the company would "take a proactive approach." DTE Electric's exceptions, p. 62 (quoting March 15, 2018 order in Case No. U-18484, p. 5).

Furthermore, DTE Electric claims that MNSC and the ALJ failed to properly analyze the company's comparison of circuits that have been hardened to those that have not. DTE Electric states that:

> [MNSC's witness] Mr. Ozar neglects that the analysis DTE Electric presented compared the performance of the 28 hardened circuits to 153 circuits unhardened circuits, not just the 55 Mr. Ozar discussed. The 153 circuits included 55 overhead lines with tree trim dates, and also included 69 underground lines, and 29 lines which have since been reconfigured, or decommissioned. The performance averages the Company compares include the performance of all these circuits, including even those without risk of a downed wire. Second, Mr. Ozar claimed in his comparison that all of the 28 hardened circuits had been trimmed in 2019 or more recently. In actuality, 8 circuits, or nearly a third of the circuits, had been trimmed in 2018. Finally, and critically, Mr. Ozar neglected that the tree trim report numbers he used for comparison are not a complete picture of all downed wires on those circuits – rather, they are only those downed wires that were caused

> by trees (MEC-97, p 5 regarding "Methodology Used to Calculate ETTP [enhanced tree trimming program] Performance" the narrative explains "*ETTP Performance . . . uses the average of three years of . . . tree-outage events*," and p 9 regarding wire-down performance calculated "*Using the same methodology discussed above*"). The comparison the Company used for hardening included all causes, including overhead equipment failures, which account for approximately 25% of all events, including downed wire events (Pfeuffer, 4T 305). Cumulatively, the effect of these differences means that the Company's analysis provides a more accurate picture of the performance of the program when measured against the remaining un-hardened system.

DTE Electric's exceptions, pp. 65-66 (emphasis in original) (footnotes omitted).

Regarding the ALJ's recommendation to approve MNSC's proposed disallowance, DTE Electric states that approval of capital expenditures for tree-trimming alone will not address the dangerous arc wire situation or resolve aging pole and pole-top equipment issues. Accordingly, the company requests that the Commission reject the ALJ's recommendation and, instead, approve DTE Electric's proposed capital expenditures.

In response to the ALJ's recommendation that the Commission direct the company to conduct a collaborative with the Staff and stakeholders to explore alternatives to converting the circuits, DTE Electric "disagrees that exploring alternatives to the current 4.8kV Hardening program is necessary or appropriate but agrees that a collaborative or other forum would be a preferable venue if the Commission wishes to explore the [ALJ]'s suggested issue." DTE Electric's exceptions, p. 66. However, the company states that a collaborative may be unnecessary, reiterating that the Commission previously approved rate recovery for the hardening program in the May 2, 2019 order in Case No. U-20162 (May 2 order) and arguing that the 4.8kV hardening program can provide safety and reliability benefits more quickly, whereas conversion could take decades.

The DAAOs support the ALJ's recommendations that DTE Electric should be required to conduct a more comprehensive analysis of the 4.8kV hardening program and alternatives, that the

Commission should adopt equity-related definitions, that the Commission should require the company to provide a more complete analysis of its infrastructure investments, and that the company should be required to work with Staff and stakeholders on a socioeconomic case study. However, the DAAOs contend that these recommendations "do not go far or fast enough." DAAOs' exceptions, p. 15. The DAAOs request that the Commission direct DTE Electric to urgently prioritize a plan for 13.2kV conversion for all communities. The DAAOs state that "it is not acceptable for certain groups of ratepayers, with clear distinctions along lines of race and income, to continue to receive measurably deficient service while paying the same rates." *Id*.

In reply to the DAAOs, DTE Electric reiterates the benefits of the 4.8kV hardening program, one of which is that it improves safety and reliability more quickly than conversion. *See*, DTE Electric's replies to exceptions, pp. 9-11. Regarding the DAAOs' claims about equity, the company states that, in testimony, it "provided a broad discussion of Energy Justice (Pfeuffer, 4 T[r] 505-[5]21), including corrections to various apparent misperceptions regarding the 4.8kV system, explaining for example that most areas of the system have sufficient capacity to incorporate some EVs and DERs, and that hardening does not in itself delay the conversion to 13.2kV (Pfeuffer, 4 T[r] 508-509, 119)." DTE Electric's replies to exceptions, p. 11.

MNSC replies to DTE Electric, asserting that the company "does not address in its exceptions the core deficiencies in its hardening 'effectiveness' analysis – hardening and tree trimming result in remarkably similar reliability and safety benefits, with orders of magnitude differences in cost." MNSC's replies to exceptions, p. 26 (footnotes omitted). MNSC provides an overview of Commission orders that address hardening and arc wire removal, contending that, contrary to DTE Electric's claims, the Commission has not considered the cost-effectiveness of hardening and has not concluded that hardening is the most prudent means of improving reliability. *See*, *id*., pp. 27-31.

Next, MNSC asserts that DTE Electric's characterization of the Commission's position on arc wire is inaccurate. MNSC states that:

> There was no directive from the Commission in [Case No.] U-18484 for DTE [Electric] to remove arc wire. To the extent the Commission approved and may continue to approve ratepayer investment in hardening in rate cases, DTE [Electric] agreed the program would include DPLD arc wire removal because that would be more cost effective than conversion, arc wire removal alone, and other approaches considered. At the same time, DTE [Electric] was clear that hardening "will also allow for the removal of DPLD arc wire where it is co-located with DTE Electric's assets, though *the removal of arc wire is not the primary driver nor the primary benefit of this program*." Now DTE [Electric] turns that around to support approval of its proposed ramp-up in hardening because it also will remove co-located arc wire it comes across in the process.

MNSC's replies to exceptions, p. 36 (quoting 4 Tr 729, filing #U-20162-0432, Case No. U-20162) (emphasis in original) (footnotes omitted).

Responding to DTE Electric's contention that MNSC conducted a flawed analysis of the company's hardened circuits, MNSC asserts that it "properly considered DTE [Electric]'s evidence to compare hardened lines to unhardened above-ground lines. Comparing hardened lines to underground lines makes no sense." MNSC's replies to exceptions, p. 38. MNSC also expresses support for exploring alternatives to hardening and options for improving safety and reliability in environmental justice communities. In conclusion, MNSC requests that the Commission adopt the ALJ's recommendation.

The DAAOs reply that:

> it is consistent with the [May 8 order] for the DAAO[s] to raise inequity and safety concerns related to DTE [Electric]'s Hardening program in the instant case. Notably, DTE [Electric] had committed to providing circuit-level reliability and environmental justice data in its Distribution System Plan in order to relieve potential equity concerns, but DTE [Electric] has yet to provide this data. Thus, DTE [Electric] cannot seek absolutions for its failures to provide information or to

> justify its investments merely by pointing to the Commission order in [Case No.] U-20561.

DAAOs' replies to exceptions, pp. 1-2 (footnotes omitted). The DAAOs reiterate that the company's hardening program does not sufficiently or quickly address racial or economic justice issues.

The Attorney General provides a brief reply, asserting that the ALJ's recommendation is fully supported by the testimony and exhibits on the record. *See*, Attorney General's replies to exceptions, p. 30.

The Commission declines to adopt the ALJ's recommendation and, instead adopts the Staff's proposed 15% reduction to the capital expenditures for this program as described above. In Exhibit A-12, Schedule B5.4, page 8, DTE Electric notes that it spent $55.17 million on the 4.8kV hardening program in 2020. DTE Electric proposed $164.8 million in capital expenditures for the 22-month bridge period, which is almost three times the amount the company spent on the program in 2020, and for the projected test year, DTE Electric proposed $114.3 million, which is more than double the amount spent in 2020. Although the company states that it "expects" a significant increase in the amount of miles hardened, the map provided in Figure 17, page 298, volume 4 of the transcript, does not explain which substation areas have current hardening work or which substations are planned for hardening work. In addition, the Commission finds that DTE Electric did not explain how the company plans to execute this significant increase in hardening work. *See*, 4 Tr 292-298, 426-428. Until DTE Electric can demonstrate the ability to spend to, or above, the amounts forecasted and show the resulting reliability benefits for customers, the Commission is reluctant to approve such large increases in capital spending.

Furthermore, to fully explore the benefits and costs of 4.8kV hardening versus other alternatives such as conversion or tree trimming, the Commission finds that a forum, other than a rate case, is appropriate. This is consistent with the Commission's expectations expressed in the September 8, 2022 order in Case No. U-20147 (September 8 order) relating to elements which should be included in DTE Electric's next distribution plan. Therefore, DTE Electric, the Staff, and interested stakeholders shall conduct one or more technical conferences in the first quarter of 2023 with the following objectives:

- Complete a full analysis that demonstrates the specific costs of hardening, conversion, DERs, tree trimming, and/or other alternatives compared with the benefits, such as improving safety and reducing SAIDI and SAIFI;

- Conduct an analysis of the capabilities/constraints of the 4.8kV system and how it affects the use of DERs and EVs compared to conversion to a 13.2kV system;

- Complete a full analysis and comparison of alternatives to hardening including, but not limited to, the use of DERs such as solar, storage, energy efficiency, and microgrids;

- Complete a full analysis of optimal reliability-focused distribution technologies and plan a course of action for arriving at an equitable future for environmental justice and other disadvantaged communities; and

- Calculate the miles of arc wire removed to date, the estimated miles of arc wire remaining, the level of confidence that all arc wire is captured in the company's inventory, and the cost of removal with the 4.8 kV hardening program and the cost without the program.

The Commission directs the company to include as part of its next distribution plan a detailed description of its plans relating to grid hardening and conversion, including anticipated timelines, and to also include learnings derived from the technical conference(s) and consistent with the expectations outlined in the September 8 order.

In addition, the Commission notes that in its October 5, 2022 order in Case No. U-21305 (October 5 order), initiating an electric distribution system audit of both DTE Electric and Consumers, the Commission specifically sought "recommendations from the third-party auditor(s) regarding actions each utility may take to reduce the number of outages and their duration and/or to improve safety, as well as the expected timeline for such measures to result in improvements to performance measurements including SAIDI and SAIFI." October 5 order, p. 15. The Commission finds that including issues relating to the relative benefits and costs of 4.8kV hardening versus other alternatives, such as conversion or tree trimming, would increase the value and utility of the audit and directs the Staff to include this comparison in the audit scope.

Finally, the Commission clarifies that it finds the removal of DPLD arc wire to be in the interest of customers and supports reasonable and prudent cost recovery for the company's arc wire removal program. While the ALJ is correct that the Commission's order in Case No. U-18484 may not have been a formal directive to remove the arc wire from its territory, DTE Electric's argument that through that order and in Case No. U-18172 the Commission expressed its expectations that the company would do so is also correct.

As DTE Electric properly noted, the Staff Summary Plan Report in Case No. U-18172 directly stated that "[o]nly the future removal of the arc wire will entirely eliminate the safety threat posed by the arc wire system to the residents of the City of Detroit." November 23, 2016 Staff Summary Plan Report in Case No. U-18172, filing #U-18172-0005, p. 7. Further, as noted by DTE Electric, the Commission's order closing the docket in that case found that "out-of-service arc wire presents a potential safety hazard to the residents of Detroit," a conclusion that remains just as true today as it did five years ago. December 7, 2017 order in Case No. U-18172, p. 7. As such, while not the primary driver for DTE Electric's grid hardening program, the Commission continues to find tangible and important safety benefits from the arc wire removal program.

d. Primary Deconductoring Pilot (B5.4, Page 10, Line 88)

DTE Electric explained that the purpose of the primary deconductoring pilot is to remove infrastructure that is underutilized or no longer needed. The company stated that, by removing this infrastructure, it will avoid unnecessary maintenance, reactive costs, and wire downs. DTE Electric noted that:

> The goal of the primary deconductoring pilot is to determine if the scope of work provides sufficient benefit to be included in 4.8kV Hardening, conversion projects, and other projects as needed. Incorporating this scope into other programs will help reduce emergent costs, provide better reliability, and assist in preparation for future conversion (by eliminating undersized equipment).

4 Tr 300. Pursuant to Exhibit A-12, Schedule B5.4, page 10, the company proposed capital expenditures of $1.8 million for the 22-month bridge period and $228,000 for the projected test year.

No party provided a response to DTE Electric's testimony and exhibit, and the ALJ did not address this issue in the PFD.

The Commission finds that the goal of this pilot, to remove unused or underutilized equipment to improve reliability and safety, reduce emergent costs, and prepare for future conversion, aligns well with the Commission's priorities. Accordingly, the Commission finds that the company's proposed bridge year and projected test year capital expenditures should be approved. However, the Commission directs DTE Electric to, in future filings, provide more detailed testimony and documentation that demonstrates how the program interacts with grid hardening, poletop maintenance, and any other overlapping programs.

e. Pole and Poletop Maintenance and Modernization (B5.4, Page 8, Line 10)

DTE Electric asserted that the pole and poletop maintenance and modernization program (PTMM) "proactively identifies and replaces damaged or defective equipment before unexpected failures occur." 4 Tr 301. Describing how the company determines which poles and poletop hardware needs replacement, DTE Electric explained:

> Annually, patrols are performed on a portion of the system to test and inspect poles and pole top hardware. The Company inspects poles on a 10 to 12-year cycle, as

> specified by the [Commission]. Results from these patrols have typically shown that approximately 8% of the total poles inspected have reduced strength and need to be remediated. These poles are either replaced or reinforced based on specific criteria. During the patrols, pole top hardware that has failed is also addressed. Examples of replaced hardware include cracked or broken insulators, which can lead to pole fires; broken guy wires, which can lead to excessive leaning and potentially to broken poles; and obsolete equipment that is prone to failures (such as cutouts and arrestors with known defects).

4 Tr 302. The company averred that it was not able to maintain a 10- to 12-year inspection cycle in 2020 because of the COVID-19 pandemic and a change in inspection contractors.

DTE Electric stated that it proposes to increase 2022 and 2023 "investments in this area due to enhancements made to the program specifications based on benchmarking and learnings from other key programs." DTE Electric's initial brief, p. 64; *see also*, 4 Tr 303. In addition, the company noted that it plans to increase the frequency of its pole inspection schedule, to modify its inspection and treatment of decay discovered in poles, and to increase the required strength for poles. *See*, 4 Tr 304. According to DTE Electric, "[o]verhead equipment related outages account for almost 25% of all events. As a result of the planned improvements to the pole/PTMM program, the Company expects to see a reduction in equipment related outage events that will drive reliability improvements, reduce reactive costs, and improve the safety of the system by reducing wire downs." 4 Tr 305.

MNSC noted that DTE Electric's plans to nearly double the $32 million spent on this program in 2021 to $59 million in 2022, to almost triple the 2021 level to $94 million in 2023, and to increase spending by approximately 25% in 2024 and 2025. However, MNSC stated that "the Company plans to inspect only about 10% more poles in 2023 than it did in 2018, and address about 376 fewer line-miles in 2023 than in 2018." 8 Tr 3991 (footnote omitted). In addition, MNSC stated that the company's "Pole Top Maintenance program was already replacing wooden crossarms with fiberglass cross arms, and porcelain cutouts and insulators with polymer equipment, and had increased the minimum pole class for primary voltage wire in DTE [Electric]'s pre-'modernization' version of the program." 8 Tr 3987-3988. Therefore, MNSC asserted that it appears that the company's proposed increased spending only applies to one new enhancement: more thorough and rigorous pole testing requirements.

MNSC contended that it "attempted to discern exactly how the Company calculated its massive Pole/PTMM spending expansion, [but] the Company has so deeply buried the cost components for 'line modernization' that it is near impossible to establish the reasonableness of the request." 8 Tr 3996. As a result, MNSC argued that DTE Electric failed to demonstrate that its proposed increased spending is reasonable and prudent and requested that the Commission set DTE Electric's spending on this program at the 2021 level of $33.44 million.

DTE Electric objected to MNSC's proposed disallowance. The company asserted that it "achieve[d] a three-year average of a 10.9-year inspection cycle based on 2018-2020 inspections" and plans to "achieve a 10-year inspection cycle using only the Pole/PTMM program." 4 Tr 429. DTE Electric explained that:

> There are four reasons that the Company set the goal to achieve a 10-year inspection cycle using only the Pole/PTMM program. First, the 4.8kV Hardening program is scheduled to end in 2026 reducing the number of poles the Company inspects. Second, the inspections that occur as part of the Pole/PTMM program are done to an updated more robust standard whereas the other inspections are less comprehensive visual inspections of the pole only and do not directly address pole top hardware. Third, the benchmarking that the Company performed for pole inspections showed that a 10-year inspection cycle (or shorter) was industry best practice. And fourth, the Company needs to comply with the [Commission] Staff's 10- to 12-year cycle recommendation and the Pole/PTMM program is the best available option to meet the intent of that guideline.

4 Tr 430. The company reiterated that its proposed increased spending for the pole/PTMM program is necessary so that DTE Electric can inspect and replace damaged equipment prior to failure, which should prevent outages and dangerous situations.

The ALJ agreed with MNSC, finding that “DTE [Electric] was not clear regarding its standards for remediation versus replacement. It also has not explained the basis for its cost projections.” PFD, p. 200. She stated that, according to the tables provided by MNSC, DTE Electric plans to increase pole inspections by approximately 6% between 2022 and 2023, however the company is proposing to increase expenditures by a total of 60% and to increase modernization by a total of 70%. *Id*. (citing 8 Tr 3991). In addition, the ALJ asserted that the data provided in the company’s discovery response in “Exhibit MEC-101 is further confounding because it seems to show no basis for the company’s projected cost increases over 2019 levels.” PFD, p. 200. She also noted that DTE Electric failed to refute MNSC’s claims that the company is already replacing poles at the new standard and, in any event, pole and poletop failures are not a significant cause of outages; therefore, additional expenditures for this program are unnecessary. Accordingly, the ALJ found that DTE Electric’s proposed expenditures should be reduced as follows:

> [the ALJ] computes the additional amount needed to reduce the 10-month bridge and test year projections to an annual expense level of $33.4 million, the 2021 expense level included on line 10 of schedule B5.4, after Staff’s 15% reduction is taken into account. The result is an additional reduction of approximately $13.9 million to the 10-month bridge and a reduction of $41.1 million to the test year. To clarify, after Staff’s adjustment and the additional adjustment recommended in this subsection, the 10-month bridge expense level included in rate base will be $27.9 million (10/12ths of $33.44 million) and the test year expense will be $33.44 million.

PFD, p. 201.

In exceptions, DTE Electric reiterates the description, scope, and goals of the program. *See*, DTE Electric’s exceptions, pp. 69-70. The company disagrees with MNSC and the ALJ that DTE Electric “is being overly ‘proactive’” in its replacement of poles and pole-top equipment; rather, the company asserts that “the program proactively identifies and replaces damaged or defective equipment before unexpected failures occur (Pfeuffer, 4 [Tr] 301)." DTE Electric's exceptions, p. 70.

DTE Electric objects to the ALJ's finding that the company's standard for remediation versus replacement is unclear and in response, cites testimony that the company contends explains the standard. *See*, DTE Electric's exceptions, p. 70. DTE Electric affirms that the company has placed increased importance on replacing outdated or damaged equipment, but argues that the company does not require replacement, noting that the decision to repair or replace is often made by line workers in the field. Thus, DTE Electric asserts that it provided full support for the proposed capital expenditures for this program.

MNSC replies, reiterating that DTE Electric favors more expensive replacement over repair without providing sufficient justification. MNSC states that "[n]one of the Company's proffered rationales explain the substantial spending increases, and the Company has not evaluated the effectiveness of its program." MNSC's replies to exceptions, p. 43; *see also*, *id*., pp. 44-47. Accordingly, MNSC contends that DTE Electric failed to demonstrate that the increased capital expenditures are reasonable and prudent and, therefore, the Commission should adopt the ALJ's recommendation.

The Attorney General provides a brief reply, asserting that the ALJ's recommendation is fully supported by the testimony and exhibits on the record. *See*, Attorney General's replies to exceptions, p. 30.

The Commission notes that pole and poletop maintenance and modernization is an important activity for improving reliability and is supportive of the program and is also supportive of effective and well-reasoned proactive repair and replacement of equipment prior to failure. However, the Commission agrees with the ALJ that DTE Electric did not clearly explain its basis for the significantly increased cost projections or the company's standard for remediation versus replacement. As noted by the ALJ, the tables on page 3991 of volume 8 of the transcript and in Exhibit MEC-101 demonstrate a small increase in the amount of pole inspections between 2018 and 2023 but propose a sizeable increase in capital expenditures. DTE Electric did not adequately explain this discrepancy. Therefore, the Commission adopts the Staff's proposed 15% reduction to the capital expenditures for this program as described above. The Commission also finds that the incremental disallowance proposed by MNSC should be approved. The Commission notes that the company has the ability to spend above the level of capital approved in this case and may recover the amount in a future rate case after the spend is proven to be reasonable and prudent.

f. Infrastructure Redesign and Modernization (B5.4, Page 1, Line 20)

i. Infrastructure Redesign and Modernization Program Overall

DTE Electric asserted that the proposed infrastructure redesign and modernization expenditures apply to major projects, such as "the construction of substations and the rebuilding of large portions of circuits." 4 Tr 313. The company explained the scope, investments, and benefits of the following subprograms in the infrastructure redesign and modernization program to provide a more complete rationale for the proposed expenditures: (1) subtransmission redesign and rebuild, (2) CODI, (3) 4.8kV conversion, (4) strategic undergrounding pilots, (5) system loading, and (6) 8.3kV CC: Pontiac conversion. *See*, 4 Tr 314-347. In 2020, DTE Electric spent $49.3 million on these programs and proposed to increase the expenditures to $215.1 million for the 10-month bridge period and $314.3 million for the projected test year.

The Staff contended that, after a review of DTE Electric's proposed plans and expenditures for the projects in this program, the "spend is premature given the conflicting details, general words and phrases (blanket, estimate, and likely needed again), and non-existent ranking of planning criteria violations. The Company has not adequately supported this spend as reasonable in the case." 8 Tr 5415. Accordingly, the Staff recommended a 40% disallowance to DTE Electric's 10-month bridge period and projected test year infrastructure redesign and modernization expenditures, "which is the calculated average percent underspend in the subprogram each year from 2020-2021 and applies the Company's 2020 forecasted spend to historic actual spend provided in Table 6 on [4 Tr 243] and the Company's 2021 underspend provided in [Exhibit S-15.3]." 8 Tr 5415-5416 (footnote omitted). Specifically, the Staff noted that its proposed disallowance results in a $71 million reduction to 2022 bridge period expenditures and an $86 million reduction to projected test year expenditures. In the event that the Commission does not adopt the Staff's proposed disallowance for the undergrounding pilot, then the Staff recommended an alternative 30% disallowance to the infrastructure redesign and modernization program expenditures, which "is the average percentage disallowance to the infrastructure redesign and modernization subprogram after applying the 2022 bridge year disallowance of $70.958 million (27.4% disallowance) and 2023 test year disallowance of $86.034 million (33% disallowance)." 8 Tr 5417.

DTE Electric disputed the Staff's proposed disallowance, asserting that historical spending should not be used to calculate the company's future capital spending needs because, in 2020 and 2021, there were historic events beyond the company's control that affected its ability to spend on these programs. The company stated that if the Commission adopts an average method for calculating a disallowance:

> it should be the method proposed by the Company, Exhibit A-41 Schedule FF4 which provides a calculated percentage of 38.3%. The disallowance would then be (shown with other proposed disallowances consistent with Staff Witness Becker page 23 lines 18-21)
> 10 months ending 10/31/2022: ($215.146 million x 0.383) - $15.100 million = $67.347 million

> 12 months ending 10/31/2023: ($314.334 million x 0.383) - $2.917 million - $36.783 million = $80.757 million
> A disallowance of $3.612 million in the bridge period and $5.277 million in the test year **less** than proposed by Staff Witness Becker.

4 Tr 434 (emphasis in original). In any event, DTE Electric argued that it demonstrated the reasonableness and prudence of the proposed expenditures and that the Commission should approve the full amount.

The ALJ found the "Staff's analysis persuasive and recommends that its recommendations be accepted, including the additional adjustments discussed in subsections ii and iii below." PFD, p. 203.

DTE Electric excepts, stating that:

> the Company fully supported the reasonableness and prudence of the projects, and Staff did not contend that any of the projects are not reasonable or prudent, or that they will not provide customer benefits. Staff simply relied on a methodology that is flawed for four reasons discussed above (in summary: (1) historic spending should not be used to forecast future strategic capital need; (2) the "average of percentages" methodology is flawed; (3) 2020 and 2021 had unique circumstances, and (4) the Company has instituted changes that will improve its planning and project execution) (Pfeuffer, 4T 433-434).

DTE Electric's exceptions, p. 71 (footnote omitted). The company requests that the Commission reject the ALJ's recommendation.

In reply, the Attorney General asserts that the ALJ's findings and recommendation are fully supported by the record and that DTE Electric's "exceptions do not add anything new to the discussion." Attorney General's replies to exceptions, p. 31.

The Commission finds that the Staff's proposed 40% disallowance should be approved. As argued by the Staff, DTE Electric uses vague terms to describe the projects included in the program and notes that the cost is an estimate. *See*, Exhibit A-23, Schedule M5, p. 141; Exhibit S-15.3, p. 5. The Commission agrees with the Staff that, based on the record evidence, the "spend is premature given the conflicting details, general words and phrases (blanket, estimate, and likely needed again), and non-existent ranking of planning criteria violations." 8 Tr 5415. However, the Commission finds that the ostensible focus, scope, and goals of the program align well with the Commission's priorities. The Commission notes that the company has the ability to spend above the level of capital approved in this case and may recover the amount in a future rate case after the spend is proven to be reasonable and prudent.

ii. Subtransmission Redesign & Rebuild: Small Projects and Reserve (B5.4, Page 9, Line 13)

DTE Electric explained that the goal of the subtransmission redesign and rebuild program is:

> installing new station equipment, as well as rebuilding both the overhead and underground portions of the subtransmission system. The station work involves the installation of large transformers, capacitor banks and associated equipment, and will provide significant improvements to the system with additional redundancy and voltage support. The overhead work will be completed to our updated grade B standards which includes the replacement of old wooden poles with new steel poles, porcelain insulators with polymer clamp top insulators, and small aging conductors – which are often damaged by multiple lighting strikes – with larger, stronger conductors able to withstand winds up to 90 mph resulting in a much more storm resilient system. The larger standard conductor will provide significantly more capacity on each circuit, while reducing the magnitude of voltage drop over long distances on the system and providing approximately twice the strength of existing conductors if a tree limb does happen to fall on it. The underground work consists of replacing at-risk or overloaded cable with new sections and rebuilding cable poles to new specifications.

4 Tr 317-318. The company analyzed customer outages that were caused by subtransmission failures and reviewed data on loading and voltage issues to determine which projects would most improve reliability and resiliency.

The Staff asserted that it reviewed Revised Exhibit A-23, M5, p. 141, which identified example projects for the program. The Staff stated that:

> the category represents a *blanket*. When asked to support the line item spend, [Exhibit S-15.3, p. 5] describes how the program is used to create smaller projects that address planning criteria violations and states the *estimate* is based on a

> combination of smaller projects that were completed in the past which are *likely needed again*. The Company then states specific examples of previous projects are included in the project details. A follow-up response in [Exhibit S-15.3, pp. 11-12] contradicts what was provided in STDE-7.46 and states the examples provided in revised Exhibit No. A-23, M5, page 141 are actual projected projects. Response STDE-25.16 also confirms that planning criteria violations in each example project have not been ranked.

8 Tr 5414-5415 (emphasis in original) (footnotes omitted). The Staff contended that DTE Electric failed to adequately support its proposed expenditures for this program and recommended that the Commission disallow $2.91 million from the company's proposed test year expenditures for this category.

DTE Electric objected to the Staff's characterization of the expenditures, asserting that "there are actual projects for 2023 calendar year. The Company has demonstrated the need for these projects and provided the detailed scope." 4 Tr 435. In support, DTE Electric stated that it provided a discovery response that clarified the record, listed the projects, and provided details. *See*, 4 Tr 435-436; Exhibit A-41, Schedule FF5.

The ALJ noted that DTE Electric's witness, Ms. Pfeuffer, did not specifically address subtransmission redesign and rebuild in her testimony. The ALJ reviewed Exhibit A-23, Schedule M5, p. 140, and noted that it:

> states for this line item: "This category includes small projects aimed at addressing thermal overloads and voltage violations on the Subtransmission system." At page 141, it further states: "This category represents a blanket to address small and localized overload conditions and voltage violations on the Subtransmission system. . . . Individual project scope will be small, such as upgrade a relay panel, reconductor approximately 0.2 miles of overhead conductor, replace approximately 0.1 miles of cable, replace trainers, etc." The document goes on to list "[s]ome examples identified for this program," followed by four bullet-pointed projects. On page 143, the document identifies "blanket funding" as the "budget basis." It also states that estimate[d] project spend in 2021-2023 is $3.5 million. A review of the line item 36 on page 9 of Schedule B5.4 shows the entire $3.5 million assigned to 2023.

PFD, pp. 205-206. In addition, the ALJ noted that the company's discovery responses on this issue are unclear and "inconsistent about what is a planned project and what is a past project." *Id*., p. 206. Therefore, the ALJ found persuasive the Staff's argument that DTE Electric failed to sufficiently support its proposed expenditures for this category of spending.

On page 72 of its exceptions, DTE Electric contends that "it identified and supported actual projects that are needed to support grid reliability for 2023, as stated in response to discovery (Exhibit A-41, Schedule FF5) and Exhibit A-23, Schedule M5, pages 140-43 (Pfeuffer, 4 [Tr] 435-436)." The company asserts that the ALJ mistakenly relied on an exhibit with incorrect information instead of the corrected response. Thus, DTE Electric argues that if the proper testimony and exhibits are reviewed, the projects are fully supported and the associated capital costs should be approved.

The Staff disagrees with DTE Electric's claim that the company's revised discovery response clarifies the record. The Staff asserts that the company's evidence still does not support the proposed capital expenditures. The Staff states that, "[a]ssuming six is the correct number of projects under the subprogram and has been appropriately corrected on the record, the Company's use of general words and phrases to explain the line item spend and absent planning criteria violation rankings used to prioritize investments is proof of premature and unsupported spend under the program that should not be overlooked." Staff's replies to exceptions, p. 4. Accordingly, the Staff requests that the Commission adopt the ALJ's proposed disallowances.

The Commission finds that the ALJ's findings and recommendations should be adopted. As discussed in the subsection above, DTE Electric's description of the project is vague and the cost provided is an estimate. *See*, Exhibit A-23, Schedule M5, p. 141; Exhibit S-15.3, p. 5. In addition, the Commission finds that, contrary to the company's claim, Exhibit A-41, Schedule FF5 does not provide the needed data or costs to clarify the record. However, the Commission finds that the ostensible focus, scope, and goals of the program align well with the Commission's priorities. The Commission notes that the company has the ability to spend above the level of capital approved in this case and may recover the amount in a future rate case after the spend is proven to be reasonable and prudent.

iii. Pilot: Strategic Service and Undergrounding (B5.4, Page 10, Line 87)

For strategic undergrounding pilots, DTE Electric projected $17 million for bridge period expenditures and $40 million for projected test year expenditures. The company explained that "overhead residential services are approximately 16 times more likely to fail during storms than underground residential service" and, therefore, the purpose of the pilot is to identify areas of the overhead electrical system that may be replaced with underground service. 4 Tr 341. Specifically, DTE Electric stated that the scope of the pilot:

> includes the installation of a looped URD [underground residential distribution] system in the rear-lot to serve approximately 60 residences on two blocks in the City of Detroit. Appoline is a 4.8kV circuit that will be converted to 13.2kV at some point in the future, therefore the pilot is being constructed to the higher voltage standard, in a way that will allow for a cost-efficient future conversion. It also includes removing the overhead infrastructure when the underground scope is complete.

4 Tr 337. The company asserted that, after reviewing the 2019 to September 2021 reliability data, DTE Electric found that underground service resulted in a 34%-52% better all-weather SAIDI than overhead service. DTE Electric stated that the proposed expenditures will allow the company to complete the Appoline pilot and two other undergrounding pilots. *See*, 4 Tr 341-343.

Local 223 supported DTE Electric's proposed undergrounding pilots and projected expenditures. According to Local 223, overhead power lines cause many more injuries and fatalities than underground service. Local 223 stated that "[w]hile reliability and costs are typically the factors that are balanced when considering replacing overhead infrastructure with underground infrastructure, Local 223 believes [sic] urges the Commission to give workers' safety and the safety of the public serious consideration." 8 Tr 3121.

The Staff objected to DTE Electric's proposed expenditures for the undergrounding pilots asserting that "[u]ndergrounding existing overhead lines is far more expensive than building overhead lines, so the potential for undergrounding being a cost-effective solution for DTE Electric's service territory is likely quite limited." 8 Tr 5431. In the Staff's opinion, the Appoline pilot should be completed and analyzed before the company receives funding for additional pilots. *See*, Staff's initial brief, pp. 41-42.

Similar to the Staff, MNSC argued that DTE Electric failed to demonstrate that undergrounding overhead lines is cost effective. MNSC stated that:

> The Company asserts a cost of $3,000,000 per mile for its backlot [Appoline] pilot. Even with anticipated future reductions in cost per mile, the exceptionally high cost needed to underground overhead lines are unlikely to be offset by commensurate benefits on a lifecycle basis. The Company has apparently acknowledged this issue, and is now proposing new pilots to underground a lateral (Fairmont DC 1593) as well as potentially other lateral and service lines.
>
> In addition, the Company asserts that the strategic undergrounding of laterals proposed in the pilot, despite it not being as cost effective as undergrounding of services, will prepare such areas for future voltage conversion. The Company has not provided any rational basis for premature replacement of existing distribution assets in anticipation of future conversions. The fact that the Company has not done circuit-level load-analysis for future transportation and building electrification (also a defect in establishing the appropriate timing of circuit conversions), exacerbates the unreasonable basis of voltage conversion as support for undergrounding.

8 Tr 4017-4018 (footnotes omitted). MNSC also objected to DTE Electric's plan to proactively replace overhead service prior to failure or imminent failure, contending that the company's policy unnecessarily increases capital spending without proof that it improves reliability. MNSC recommended that the Commission require DTE Electric to complete and analyze the Appoline

pilot before approving increased expenditures for additional pilots.

The Attorney General recommended a 20% reduction to projected distribution system expenditures, which included the undergrounding pilot. She contended that the company "experienced significant issues and higher costs than it had anticipated when it began the [Appoline] pilot program in 2019 . . . did not obtain pre-approval from customers before proceeding with the pilot project[,] and did not adequately scope the work required to complete the project." 8 Tr 4762-4763. The Attorney General noted that DTE Electric acknowledged that these are lessons learned; however, the company proposes to spend up to $60 million on new pilots but has not identified any new information that DTE Electric hopes to learn from these new pilots. Accordingly, the Attorney General asserted that the company failed to adequately support the proposed expenditures and requested that the Commission disallow $17.3 million for the 10-month bridge period and $36.8 million for the projected test year. If the Commission approves the overall reduction to capital spending recommended by the Attorney General, she asserted that there is no need for the Commission to remove specific expenditures for the undergrounding pilots.

In response, DTE Electric contended that the Appoline pilot is complete "[f]or all intents and purposes." 4 Tr 438. The company asserted that the remaining residential underground service conversions are expected to be completed by the end of the year and DTE Electric has obtained "key learnings from Appoline to apply to future Strategic Undergrounding work." 4 Tr 438; *see also*, 4 Tr 446-447. The company emphasized that these pilots should be applied to, and will benefit, circuits that regularly experience reliability and safety issues such as Fairmont. In addition, DTE Electric disagreed with the Staff that undergrounding is not cost effective; rather the company stated that it "can obtain cost advantages of larger scale by increasing the volume of its

Strategic Undergrounding work. There are also safety and reliability considerations beyond cost (Pfeuffer, 4T 343, 440-443)." DTE Electric's initial brief, pp. 70-71. Finally, DTE Electric agreed with MNSC that benchmarking and lifecycle analyses are important factors for strategic undergrounding but asserted that these factors can only provide helpful information when they are supported by actual experience of the pilots. *See*, DTE Electric's reply brief, p. 49.

The ALJ found the Staff's, MNSC's, and the Attorney General's testimony to be persuasive. She found that:

> The initial pilot for which approval was granted has not in fact been completed, and the Commission and the parties should have the benefit of a full report on the costs of the pilot, including the costs of obtaining customer consent and dealing with unanticipated construction obstacles, prior to approving additional funding. As the parties note, the company is proposing to spend an additional approximately $60 million on these projects in 2022 and 2023. Moreover, it appears that the company is now considering this at least akin to a permanent program, which is premature for the reasons articulated by Staff, the Attorney General, and MNSC.

PFD, p. 218. In addition, the ALJ noted that DTE Electric failed to provide a lifecycle analysis of the benefits of undergrounding, or the cost of maintaining the system, in relation to the cost of converting overhead lines to underground. Furthermore, she noted that DTE Electric "has not provided a final cost estimate for that pilot, or explained why it believes that pilot will be completed anytime soon. The company did not make any attempt to quantify the costs and benefits of its pilot." *Id*., p. 219. As a result, the ALJ recommended that, at this time, the Commission should disallow the expenditures for continuing the pilot program until the company can demonstrate a "credible cost estimate or timeline for the work it proposes to undertake." *Id*.

DTE Electric excepts to the ALJ's recommendation to disallow all capital expenditures for this pilot. The company argues that the ALJ failed to consider that the company has gained beneficial learnings from the Appoline pilot that can be applied to future programs, that DTE Electric "can obtain cost advantages of larger scale by increasing the volume of its Strategic

Undergrounding work," and that there are "safety and reliability benefits beyond construction cost." DTE Electric's exceptions, p. 75. In response to the ALJ's finding that the company failed to provide a lifecycle analysis of the benefits of undergrounding, DTE Electric "note[s] that the need for a lifecycle analysis has never before been communicated to the Company." *Id.*, p. 77. In addition, the company reiterates that a lifecycle cost analysis is only instructive when it is supported by actual experience with a pilot. Finally, DTE Electric states that to improve safety and reliability and to understand the potential for undergrounding, full capital funding of the pilot programs is necessary.

In reply, the Staff restates its support for the recommended disallowances. The Staff states that "[u]ndergrounding existing overhead lines is expensive, and the Company has more work to do on its Appoline DC 1346 pilot. The Commission should adopt the [ALJ]'s recommendation to reject proposed spending on this project at this time." Staff's replies to exceptions, pp. 2-3.

MNSC replies that, contrary to DTE Electric's claims, the ALJ fully considered the Commission's directives for undergrounding pilots and the potential safety and reliability benefits of the pilots. Additionally, in response to DTE Electric's claim that it has never been asked to present a lifecycle analysis, MNSC states that, "[f]irst, this is the first rate case where the Company presented its proposed test year investment. Second, the Company has not demonstrated why it must advance the next costly pilot before it may develop a lifecycle cost analysis." MNSC's replies to exceptions, p. 55. Thus, MNSC requests that the Commission adopt the ALJ's recommendation.

In the August 25, 2021 order in Case Nos. U-21122 *et al*. and the September 8 order, the Commission directed investor-owned utilities to provide strategic undergrounding proposals so that the Commission may gain a better understanding of the costs and benefits of undergrounding.

On page 74 of the September 8 order, the Commission noted that "this topic of undergrounding is also raised in Case No. U-20836, DTE Electric's pending general rate case . . . ." Although DTE Electric claims that the Appoline pilot is complete and all necessary learnings have been provided, the Commission disagrees. The Commission's directive for strategic undergrounding proposals was founded in the fact that the Commission may gain a better understanding of costs and benefits, and this information has not yet been communicated to the Commission. As noted by the ALJ, the Commission and interested stakeholders would benefit from a full report on the Appoline pilot including, but not limited to, a benefit/cost analysis (BCA) that considers other less costly alternatives such as tree trimming, an analysis of the interaction between undergrounding and grid hardening or 13.2kV conversion, a description of how undergrounding may be included in a distribution plan, and a discussion of health, safety, reliability, and vulnerability. Therefore, the Commission directs the company to submit a full report, including a BCA and the other information noted above, in its next rate case.

Furthermore, the Commission does not intend to forestall the continued learnings that could be derived from subsequent strategic undergrounding pilots as it awaits the submission of a full report on the Appoline pilot. For future proposed strategic undergrounding pilots, however, the Commission expects DTE Electric to provide how the benefit/cost of the proposed undergrounding pilot compares to that of other solutions the company is currently employing to enhance the reliability of the distribution system. This includes, but is not limited to, benefit/cost comparisons of strategic undergrounding alongside the benefit/cost of employing grid hardening, grid conversion, tree trimming, or other solutions. Therefore, until the Appoline pilot is complete and a full report is available, and until a more robust analysis of the benefit/cost of strategic undergrounding is available, the Commission finds it reasonable and prudent to approve a

$15.1 million disallowance for the 10 months ending October 2022 and a $36.8 million disallowance for the projected test year.

g. Technology and Automation (B5.4, Page 1, Line 21; B5.4, Page 11)

i. General Adjustments

DTE Electric stated that the strategic capital investments for technology and automation are "tightly linked to the grid modernization process and include investments that develop capabilities in observability, analytics and computing, controls, and communications." 4 Tr 347. The company highlighted four projects for this category of expenditures: (1) grid automation telecommunications, (2) distribution automation, (3) conservation voltage reduction (CVR)/volt-var optimization (VVO), and (4) NWAs. For the 22-month bridge period, DTE Electric proposed $173 million and for the projected test year, $137.34 million.

The Staff objected to DTE Electric's "High-level T-Shirt Sizing Cost Estimation method" that was applied to all cost estimations in the technology and automation category. 8 Tr 5187. The Staff explained that it:

> is concerned about the accuracy of the high-level cost estimates, especially given details about the High-Level T-Shirt Sizing Cost Estimation method which seems to only consider project size/complexity and duration in estimating the project cost. Little consideration for the project scope, goals, and desired outcomes seem to figure into the High-Level T-Shirt Sizing Cost Estimation process.

8 Tr 5188. For technology and automation projects for which the Staff does not object to the scope, the Staff proposed a 20% disallowance because the company simply described these as "high-level costs." *See*, 8 Tr 5220.

In addition, the Staff noted that "[s]ome of the Technology and Automation projects are entirely or partially involve software implementation" and the Staff expressed concern that the company is improperly capitalizing certain costs rather than expensing them as O&M. 8 Tr 5190.

The Staff cited the Financial Accounting Standards Board Accounting Standards Codification 350-40, which provides guidance about internal use software that is used by DTE Electric to determine software cost capitalization. The Staff contended that the automation configuration and test record database project is in the preliminary stage and, pursuant to the company's accounting policies, is "not eligible for capitalization." 8 Tr 5191. The Staff also noted that the costs for the operational technology and error free communication project are "for system upgrades or enhancements" and should be expensed as O&M. 8 Tr 5194.

For the "other costs" category in the technology and automation project, the Staff contended that, "[t]hough the Company has not done any variance analysis around Other Costs, Staff examined the variance of Other Costs as a percentage of total project costs for the projected test year, finding percentages vary from 5.17% -18.12%. However, there is no explanation from the Company regarding the Other Cost variation or cost estimations." 8 Tr 5222 (footnote omitted). As a result, the Staff requested that the Commission disallow "amounts over the minimum of 5.17% of recommended allowed total project costs." 8 Tr 5222.

Next, the Staff compared actual historical 2020 spend that was provided in the immediate case with the projected 2020 amount set forth in Case No. U-20561, noting that not all projects that were proposed in this case were present in Case No. U-20561 and some projects were not discernable for comparison purposes. *See*, Exhibit S-7.42. For the projects in Case Nos. U-20836 and U-20561 that align, the "Staff found variation in the alignment of the Company's actual spending with the projected amounts. The percent of projected capital costs that were actually spent in 2020 varied from 0.36% to 133.8%, with an average of 73.3% of projected costs actually spent." 8 Tr 5224 (footnote omitted). Therefore, the Staff recommended that the Commission limit the capital expenditures in this category to the historical 2020 level and:

> In cases where the Company actually spent less than the projected amounts in 2020, Staff recommends a downward adjustment for the applicable projects that is equivalent to the percentage of the 2020 projected costs that the Company failed to spend. As the Company has not indicated substantial changes in its project cost projections or its project managers, Staff finds this process reasonable and prudent to adjust for the known limitations of project level cost projections, as well as historic project management decisions regarding spending which provides a reasonable prediction of future project management and spend.

8 Tr 5224-5225.

In total, the Staff's recommended disallowance for technology and automation projects is $89.9 million for the 22-month bridge period and $76.1 million for the test year.

In response, DTE Electric disagreed with the Staff that the company is improperly classifying expenditures for automation configuration/test record database and operational technology/error free communication. *See*, 4 Tr 452-454. Additionally, the company disputed the Staff's analysis of DTE Electric's investment in technology and automation:

> Staff Witness Wang independently calculates a forecast for 2020, ignoring the one that was provided in the referenced case. Second, Staff Witness Wang does not include all the projects under the Technology and Automation category. Third, Staff Witness Wang calculates percentage of under/overinvestment per project, then averages these percentages together to derive overall percentage of underinvestment.

4 Tr 455; *see also*, DTE Electric's initial brief, pp. 73-75. The company contended that the Staff's calculation improperly changes DTE Electric's 2020 forecast by introducing 2019 and 2021 projections into the 2020 forecast and the Staff provided no rationale for changing the forecast.

Regarding the Staff's characterization of the company's estimating method as a "High-Level T-Shirt Sizing Cost Estimation process," DTE Electric asserted that its cost estimates are "based on defined scope and timelines and have been vetted thoroughly by the Company's Technology Investment Committee, [and] are just the initial planning estimates that remain in place until the program is ready to start." 4 Tr 464; *see also*, Exhibit A-23, Schedule M6, p. 94, and

Exhibit A-41, Schedule FF11. Finally, DTE Electric objected to the Staff's analysis of "other costs," stating that the Staff failed to conduct a thorough review of 2020 and 2021 costs and the Staff's proposed disallowance was based on an arbitrarily selected lowest value. 4 Tr 462; *see also*, Exhibit A-41, Schedules FF9 and FF10, and Exhibit A-43, Schedule HH6.

The Staff acknowledged that, for the 2020 forecast used in its analysis:

> Staff overlooked the 2020 projections provided in Case. [sic] No. U-20561 and only used the total bridge year costs. The Company is correct that Staff's calculated forecasted amounts for 2020 led to different amounts than the Company's forecast. Staff, therefore, revises its recommended disallowances by using the Company's [Case No.] U-20561 projections and the new project level percentage of projected cost that was actually spent. This results in . . . a revised projected bridge period recommended capital disallowance of $14,695,000 and projected test year recommended capital disallowance of [$]9,980,801 across eight projects.

Staff's initial brief, pp. 85-86. In response to DTE Electric's objection to the Staff's analysis of "other costs," the Staff stated that "[t]he Company continually fails to explain how 'Other' 'costs [sic] were allocated in detail. It explains only in high-level generalities and does not explain specifically how the percentage of 'Other' costs differ for individual projects or detail the 'Other' cost estimation methodology." Staff's reply brief, p. 12. The Staff asserted that, contrary to DTE Electric's claim, Exhibit A-41, Schedule FF9 does not describe the "other costs," how they are spent, or for what purpose they are spent.

After a review of Exhibit A-23, Schedule M6 and the company's discovery responses in Exhibits S-14 and S-15, the ALJ determined that although DTE Electric contends that it provided an "engineering estimate" for its cost projections, these estimates are, in reality, the "High-Level T-Shirt Sizing Cost" projections alleged by the Staff and they lack an actual cost foundation. She explained that:

> Schedule M6 does not provide any comparable cost detail for 2021 spending, and it does not provide total project cost, or O&M costs. Considering the IT [information technology] relationship embedded in this cost category, it is particularly troubling

> that DTE [Electric] did not provide the information the Commission has called for regarding IT projects, which is discussed in more detail below but requires detail missing from Schedule M6. On this basis, the company's response regarding the capitalization or expensing of these costs is also not persuasive. The company did not establish any O&M expense projection for these line items. And its contention that none of the projects are in a preliminary phase is not credible given the project descriptions. [Staff's witness] Dr. Wang cited the automation configuration and test record data base as an example, referencing Schedule M6 extensively, including the project descriptor that included "data preparation and conversion," and "evaluating software options." DTE [Electric] did not present any project timelines associated with its expenditures, and did not present O&M expenses incurred to date, so its vague assertions that it has passed the preliminary project phase and that its accounting will be correct are not persuasive. DTE [Electric] had complete control over the information it chose to present in support of its projected expenses.

PFD, p. 228 (quoting Exhibit A-23, Schedule M6, p. 132) (footnote omitted).

The ALJ also found the Staff's proposed disallowance to "other costs" to be reasonable and prudent. She noted that although DTE Electric provided revised Schedules M4 through M6 in Exhibit A-23, it "included the exact same cost allocation on all pages: 75% labor, 15% materials, and 10% other. DTE [Electric] did not explain its revised filing other than to state in the cover letter that the revision was "'limited to correcting the breakdown between material/labor/other for projects.'" PFD, pp. 228-229 (quoting the cover page of DTE Electric's filing #U-20836-0255). The ALJ stated that the company did not explain the calculations for "other" costs and included contingency for some cost elements. PFD, p. 229. Therefore, she found the Staff's proposed disallowances to be reasonable and prudent and that they should generally be adopted. The ALJ also stated that she will address the Staff's historical adjustments in relation to the individual line items below.

DTE Electric excepts, objecting to the ALJ's recommendation to adopt the Staff's proposed disallowances and asserting that the Staff's methodologies and adjustments are unreasonable and improperly generic. DTE Electric explains that the Staff's proposed 20% disallowance is a "unique calculation method [that] resulted in forecasted amounts different than those that the Company actually presented in Case No. U-20561 (Pfeuffer, 4 [Tr] 455-457)." DTE Electric's exceptions, p. 79. In addition, the company claims that the Staff performed its analysis on only half of the projects in the technology and automation program, which results in a skewed analysis. Furthermore, DTE Electric contends that the Staff "use[s] its own analysis selectively, applying it to investments when doing so would support proposed disallowances, but then not applying that same analysis to investments when doing so would not support a disallowance." *Id*., p. 80. In the company's opinion, because the Staff revised its proposed disallowance in briefing, this demonstrates that the Staff acknowledged the flaw in its analysis.

DTE Electric also disagrees with the ALJ's recommendation to adopt the Staff's proposed disallowance for "other costs." The company states that "it allocates many different overhead costs, consistent with the Uniform System of Accounts (USOA) requirements." DTE Electric's exceptions, p. 83. DTE Electric contends that the Staff's recommended fixed rate of 5.17% is unreasonable because overhead costs vary depending on the type of project and the direct costs associated with the project.

Regarding the ALJ's determination that DTE Electric's supporting evidence for these costs included a flat rate allocation of costs, the company "admits that it filed its case with flat rates, however, the Company also explained that doing so was the result of human error (a single cell was accidentally copied into all the cells in the column) and promptly submitted Revised Schedule M6, which provided the actual calculations used in the 'other' category, as soon as it realized its error." DTE Electric's exceptions, p. 83. However, the company contends that it would be improper to also apply the Staff's flat rate to the capital expenditures for the program.

In conclusion, DTE Electric argues that it has responded to and rebutted the Staff's recommended disallowances. The company asserts that "it is not reasonable or prudent to propose disallowing an entire group of projects based solely on a concern about a cost-estimating model. This is especially true where the Staff does not question the reasonableness or prudence of the projects themselves." *Id*., p. 85. DTE Electric avers that the Staff's proposed full disallowance is not supported on the record and requests that the Commission reject the ALJ's recommendation.

In exceptions, the Staff states that:

> Beyond the recommendation to generally adopt Staff's recommendations in the section, the [ALJ] does not say [she] adopts Staff's recommended disallowance for high-level "t-shirt sizing" estimates in the Technology and Automation section. However, the [ALJ]'s conclusion that all expense projections in Exhibit A-23, Schedule M6, are "t-shirt sizing estimates" is broader than Staff's recommendation. It leads the reader to conclude that the [ALJ] is supportive of Staff's recommendation regarding high-level estimates in the Technology and Automation section and that the [ALJ] may also be advocating for the adjustment to be made broadly for all projected costs in Exhibit A-23, Schedule M6. Lastly, the [ALJ] discusses Staff's historical spending adjustment, which Staff emphasized was for cost projection accuracy, in the context of individual line items. The [ALJ] adopts many of Staff's recommended disallowances for the Technology and Automation projects, many of which include recommended disallowances for historical spending/cost projection accuracy, such as NWA Port Austin Load Relief and NWA EV Charging Demonstration at ACM [American Center for Mobility]. [She] also adopts Staff's recommended disallowances for high-level IT estimates for several projects, like Work Management & Scheduling Upgrades, Asset Management Upgrades, and Load Forecasting & Analytics.

Staff's exceptions, p. 6 (footnote omitted). The Staff contends that the PFD does not individually address several projects for which the Staff recommended disallowances for "other costs," lack of accuracy in cost projection, and/or high-level cost estimates: (1) Distribution Sensing and Monitoring, supervisory control and data acquisition (SCADA)/advanced metering infrastructure (AMI) Enhancements, Automation: Substation, Automation: Distribution, CVR/VVO, Mobile Technology, Substation Design Tool Upgrades, Microwave End of Life, SCADA Remote Access and Configuration Platform, Sensor Network and Algorithm Development, and Substation Cybersecurity.

The Staff asserts that the Commission should adopt the Staff's proposed disallowances for "other costs," historical cost analysis for cost projection accuracy, and high-level IT estimates. The Staff states that, "[g]iven that the logic behind the recommended disallowances on a project level are the same within each of these categories, the Commission should adopt Staff's recommended disallowances in full for these areas, especially as the [ALJ] concludes that Staff's adjustments in these areas should be generally adopted." Staff's exceptions, p. 7.

The Attorney General replies to DTE Electric, contending that the ALJ's findings and recommendation are fully supported by the record. She asserts that in DTE Electric's exceptions, the company reiterates the arguments set forth in testimony, which have been addressed by the ALJ. *See*, Attorney General's replies to exceptions, pp. 31-34.

The Commission finds the Staff's proposed 20% disallowance for the 11 projects set forth in Exhibit S-7.38, the Staff's "High-level T-shirt Sizing Cost Estimation," the Staff's historical spending adjustment, and the Staff's "other costs" adjustment as revised in the Staff's reply brief and explained in exceptions, to be reasonable and prudent. *See*, Staff's reply brief, pp. 10-14; Staff's exceptions, pp. 5-7. As noted by the Staff, DTE Electric's high-level estimations suggest significant uncertainty that the costs will occur and the company fails to explain the variation in "other costs" or how the costs are estimated. *See*, 8 Tr 5220-5222. However, any reasonable and prudent expenditures above the approved costs in this category can be presented by the company in a future rate case for recovery.

ii. Advanced Distribution Management System: Distribution Management System/Outage Management System

DTE Electric stated that the ADMS program consists of three projects: (1) generation management system (GMS) and energy management system (EMS), (2) DMS/OMS, and (3) NMS. The company explained that:

> The ADMS program is comprised of the hardware and its associated software that will substantially improve DTE Electric's ability to manage the flow of electricity from the point of generation to the point of delivery, to monitor the condition of the grid, to safely operate it, and to respond to emergency conditions and outages more quickly. The "advanced" portion of the ADMS refers not just to improved functionality, but also to the significant level of integration that is now available across components that in the past were separate, in terms of communication, from one another. These components, and the business processes that enable them, perform different functions but benefit significantly from being able to share data seamlessly.

7 Tr 1490. DTE Electric noted that GMS/EMS, DMS/OMS, and NMS have five components, which are described in testimony. *See*, 7 Tr 1491-1492. The company averred that $58.1 million for ADMS was approved for rate base in Case No. U-20561, and DTE Electric contended that it "successfully completed the implementation of the GMS in 2018, followed by the EMS in 2019, and NMS in 2020." 7 Tr 1498.

According to the company, OMS was to be completed in 2020 and DMS was to be completed in 2021, however full implementation has been delayed. DTE Electric explained that:

> The major cause of the delay in the OMS and DMS components was the development and delivery of the mobile Compass tool from OSI [OSI, Inc.] . . . . While there was some delay early in the project to ensure Compass was compatible with multiple field devices (iOS, Android, etc.), most of the delay occurred in 2020 and 2021. Specifically, OSI delivered the first working Compass test environment in the second quarter of 2020, opposed to December 2019 as planned. Once the base product was delivered, the Company partnered with OSI to continue developing the additional functionality required to replace the Company's existing (legacy) mobile tool and to improve the functionality between the new Compass mobile tool and the base OMS product. Restrictions imposed during the COVID pandemic made the partnership and continued development of the Compass tool extremely challenging. For example, the OSI and DTE Electric project teams were

> not able to travel and meet in person until August 2021. Due to the complexity of the technology required to support the needed mobile functionality, and the increased complexity of partnering on a project of this magnitude given the restrictions in place due to the pandemic, the Company had to make the decision to move the implementation date of the DMS Network Model, OMS, and Compass mobile tool. The critical nature of these systems to the Company's daily operations informed this decision. Although some systems can be deployed and continued to be refined over time after they are live, it was determined that this system needed additional design improvements and testing in order to be ready for use in operations by the Company and avoid potentially costly workarounds and problems.

7 Tr 1503-1504. The company asserted that DMS/OMS should be fully implemented by the fourth quarter of 2022. *See*, 7 Tr 1511-1512.

DTE Electric acknowledged that while the Compass tool is implemented and the old system is phased out, field personnel will require a mobile solution to receive trouble work assignments. Therefore, the company "will pull up the emergent trouble field force management portion of the ClickSoft project into 2022, and then use the ClickSoft mobile application as the cutover-required mobile software to allow OH [overhead]/UG [underground] field resources to receive trouble job assignments and details associated with those jobs." 7 Tr 1507-1508. DTE Electric stated that the projected cost of ADMS: DMS/OMS is $93.9 million, which includes 2019 historical costs.

In Exhibits S-7.41 and S-7.42, the Staff noted that DTE Electric spent 82.6% of the ADMS: DMS/OMS expenditures approved in Case No. U-20561 and, therefore, the Staff recommended a disallowance of $8.76 million for the 22-month bridge period and $2.16 million for the projected test year. Additionally, for ADMS: DMS/OMS "other costs," the Staff proposed setting the level at 5.17%, which is the percentage of cost variation. However, in its initial brief, the Staff asserted that DTE Electric spent only 69.3% of the amount projected in Case No. U-20561. *See*, Staff's initial brief, p. 86. As a result, the Staff revised its recommended disallowances: $11 million for the 22-month bridge period and $2.7 million for the projected test year.

DTE Electric disagreed with the Staff's proposed disallowance and rationale, asserting that the Staff "fail[ed] to address the cause of delays in 2020 provided . . . on [7 Tr 1503-1505] and assumes that these delays will continue into 2022 and 2023, without providing any supporting evidence. In [Ms. Andahazy's] direct testimony, [she] provided mitigation steps put in place that will prevent further delays." 7 Tr 1543. The company asserted that the projected expenditures are required to implement OMS, the DMS applications, the Compass mobile tool, the emergent trouble portion of the ClickSoft project, and the expanded ADMS reporting scope, all of which provide benefits to customers.

The Attorney General claimed that DTE Electric's decision to proceed with the implementation of ADMS: DMS/OMS was very risky and detrimental. She stated that:

> Most of problems with the project delays and cost overruns for the OMS/DMS project are the result of the Company's decision to proceed with implementation of this system knowing that the OSI's OMS products were still relatively new and their Compass mobile solution was still under development. Nevertheless, the Company proceeded with contracting with OSI and later discovered that OSI could not meet its obligations.

8 Tr 4768 (footnote omitted). The Attorney General asserted that DTE Electric failed to provide sufficient evidence that the delays and cost overruns for the project are reasonable and, therefore, requested that the Commission disallow $28.45 million for the 10-month bridge period and $12.43 million for the projected test year.

DTE Electric objected to the Attorney General's proposed disallowances, stating that she:

> does not provide evidence that the ADMS investment does not provide value to the customers and the Company as described in the All-Weather SAIDI improvements, and additional benefits noted [on 7 Tr 1494], Table 1 and [7 Tr 1495]. Nor does [the Attorney General] address that ADMS is the essential technology to support the modernized grid as stated by Company Witness Bruzzano in Case No. U-20162, [4 Tr] 756 lines 13-18 . . . .

7 Tr 1540. DTE Electric asserted that the ADMS investment is necessary to replace systems that are at end-of-life. In addition, the company contended that it is not reasonable and prudent to only adopt technologies that are fully developed in the industry: "'Simply because technology is new does not mean that it should be ignored, or that it will not provide a benefit to ratepayers.'" 7 Tr 1542 (quoting May 2 order, p. 28). Finally, DTE Electric objected to the Attorney General's proposed disallowance arguing that she is attempting to "retroactively disallow capital that has been previously approved by the Commission because [she] doesn't agree with the investment, not because of the project delays and associated project investment increases as described." 7 Tr 1541.

The ALJ found that DTE Electric did not sufficiently support the proposed additional expenditures for the ADMS: DMS/OMS project. She stated that:

> DTE [Electric] seems to acknowledge it is standard industry practice to hire a System Administrator when implementing ADMS, yet DTE [Electric] did not retain one until 2020, well into the project and well after the first version of OMS was supposed to be approved. Nor has DTE [Electric] explained whether it took any contractual steps or has identified any contractual remedies associated with the delay. For these reasons, it has failed to show that it reasonably and prudently implemented this project, and the cost overruns should not be funded by ratepayers.

PFD, p. 238 (footnote omitted). The ALJ noted that when DTE Electric completes implementation of DMS/OMS, the company should prepare a detailed presentation of the costs involved and seek recovery of the costs.

In exceptions, DTE Electric objects to the ALJ's recommendation that "cost overruns" should be disallowed. The company asserts that:

> the [ALJ]'s rationale is based on new criticisms (unfounded speculation that hiring a System Integrator earlier would have changed results that were driven by COVID and other issues, and criticizing the Company for not explaining something that was not an issue) rather than a discussion of the evidence and arguments that were presented, and which are discussed below for a proper understanding of this area.

DTE Electric's exceptions, p. 103 (footnote omitted). DTE Electric reiterates the arguments set forth in testimony and exhibits, arguing that it sufficiently supported the proposed capital expenditures for the project. *See*, DTE Electric's exceptions, pp. 103-106. The company contends that "the Commission previously found the investment in ADMS: DMS/OMS to be beneficial to customers. The remaining investment is needed to complete the project and ensure its full functionality for the benefit of customers." *Id*., p. 106.

In reply, the Attorney General contends that:

> DTE [Electric]'s exceptions misleadingly imply an apples-to-apples comparison of ADMS expenses sought in previous cases, that may have been approved, and those sought in this case. To be clear, those sought in this case are additional costs, above and beyond anything that has been approved before. Just because certain costs have been approved in the past does not mean that additional costs related to that same project are automatically reasonable.

Attorney General's replies to exceptions, p. 37. She asserts that the ALJ's recommendation is reasonable and prudent and should be adopted.

As an initial matter, the Commission notes that it supports the integration of this type of improved technology to manage and operate the grid, to more effectively respond to emergencies, to modernize DG and other technologies, and to integrate multiple forms of communication. And, the Commission acknowledges that expenditures for ADMS implementation were approved in the May 2 and May 8 orders. However, the Commission agrees with the ALJ that DTE Electric has not demonstrated that the additional expenditures proposed in this case are reasonable and prudent.

According to DTE Electric, it began investigating ADMS technology in 2015 and 2016, it developed an ADMS implementation strategy in 2017, and "the first version of the OMS software was scheduled to be delivered in June 2019," with implementation planned for late 2020. 7 Tr 1498. In addition, the company asserts that "[t]he DMS phase of the project was scheduled to kick off in July 2019, which supported a staggered implementation throughout 2021, transitioning into full day to day operational support in 2022." 7 Tr 1498; *see also*, 7 Tr 1496-1497. However, DTE Electric states that it did not retain an experienced system integrator until early 2020. The company explains that hiring a system integrator "is industry standard practice when implementing an ADMS" and that "[t]he System Integrator helps the company with the overall delivery strategy, coordinates all testing efforts, coordinates integration between software packages (new and legacy software), and creates appropriate training materials for the organization." 7 Tr 1502-1503.

The Commission finds that DTE Electric did not explain why, earlier in the ADMS planning process, the company did not hire a system integrator whose expertise and experience likely could have alleviated some of the software missteps, project delays, and cost overruns. Further, as noted by the ALJ, the company provided no testimony or evidence that DTE Electric is pursuing any possible contract remedies to reduce or eliminate the cost overruns associated with software compatibility issues. Therefore, the Commission finds the Staff's recommendation reasonable and prudent to limit DTE Electric's expenditures to the percentage spent of the projected ADMS amount in Case No. U-20561. Accordingly, the Commission approves disallowances of $11 million for the 22-month bridge period and $2.7 million for the projected test year.

iii. Advanced Distribution Management System: Network Management System (B5.4, Page 11, Line 3)

DTE Electric stated that NMS "allows the Company to maintain high quality system data, which is essential to the safe and effective monitoring and operations of the grid." 7 Tr 1492. Although the company asserted that implementation of NMS was complete in 2020, DTE Electric proposed $6.3 million in additional expenditures for enhancements that were not included in the scope of the original project.

In Exhibits S-7.40 and S-7.42, the Staff proposed disallowances of $732,603 for the 22-month bridge period, $710,903 for the projected test year, and a 20% reduction based on the Staff's claim that the company's cost estimate for the project falls within the High-level T-shirt sizing estimate method.

DTE Electric disagreed with the Staff that the projected expenditures for NMS were based on a high-level estimate. *See*, DTE Electric's initial brief, p. 90. The company asserted that, as set forth in Exhibit S-7.41, DTE Electric has already invested 133.8% of the capital expenditures requested in Case No. U-20561. In addition, the company stated that, "[o]ther than the two proposed disallowances, Staff witness Wang's only mention of the ADMS: NMS project was [in 8 Tr 5218-5219] where she references its usefulness to question the investment in the Interconnection Process Enablement project." 7 Tr 1538.

The Attorney General argued that DTE Electric failed to demonstrate that the proposed additional spending of $6.3 million for this project is reasonable or prudent. She stated that "it is not clear what the additional data requirements are and what incremental value will be generated by the additional functionality. The Company spent $17.5 million to gather supposedly high-quality system data and now states that it should have gathered more data but cannot clearly define what that data is." 8 Tr 4765 (footnote omitted). In addition, the Attorney General noted that DTE Electric proposes to add new functionality and features to NMS. However, she contended that "[i]t is perplexing why, if these features are valuable, they were not included the original scope of the project." 8 Tr 4766. Furthermore, the Attorney General asserted that the company failed to provide a BCA demonstrating that the additional spending is economically justified. Therefore, she recommended that the Commission disallow $2.33 million for the 10-month bridge period ending October 2022 and $2.88 million for the test year.

In response, DTE Electric averred that in 7 Tr 1498-1502, the company:

> provide[d] all of the details regarding the successful implementation of the initial ADMS: NMS project investment, how the Company determined the need for additional investments in the network model, and the actual work to be completed for the requested funding level of $6.3 million during the rate case period. The Company also responded to 16 discovery questions (as seen in Exhibit A-46, Schedule KK1), in particular response AGDE-7.205a, regarding the proposed investment, providing details to clarify the investment requirements.

7 Tr 1536; *see also*, DTE Electric's initial brief, pp. 89-90. Moreover, DTE Electric contended that it is reasonable and natural for new technologies and processes to evolve over time and require additional investment after the initial project is completed.

The ALJ agreed with the Attorney General that DTE Electric did not adequately support the proposed additional capital expenditures for NMS. She explained that "DTE [Electric]'s discussions of its project benefits do not readily allow for evaluation of the benefits of this project relative to the many other DTE [Electric] projects that similarly promote savings, and the company's decision not to provide any quantification of the project benefits also frustrates review." PFD, p. 242.

DTE Electric excepts, asserting that it fully supported the capital costs associated with this project. The company states that "[t]he [ALJ]'s rationale also lacks merit and relevance. Whether the [Attorney General]'s witness reviews discovery requests and whether other projects have more or less benefits are not a standards [sic] for recovery (particularly where, as here, the [ALJ] acknowledges that all of the projects promote savings)." DTE Electric's exceptions, p. 108.

In reply, the Attorney General asserts that DTE Electric failed to provide a substantive objection to the ALJ's recommendation. She states that the company's "discussion was fully rebutted by both herself and the ALJ, that the [ALJ]'s rationale is relevant and well-supported, and that baseless speculation that the ALJ did not apply the proper standard to her review, without any citation, should be rejected." Attorney General's replies to exceptions, p. 39.

Similar to the ADMS: DMS/OMS program, the Commission supports the integration of this type of advanced technology to maintain data that assists with managing and operating the grid. However, according to DTE Electric, ADMS data requirements continuously evolve, requiring new investment. DTE Electric asserts that:

> As the Company, and the overall utility industry, continue to develop and implement new technologies and processes, and external demands on the system (example includes Distributed Energy Resources) continue to change, new data and/or data characteristics will be required on an ongoing basis. It is important to monitor these evolving needs and adapt system requirements to ensure the ADMS: NMS and other distribution technologies meet the needs of the Company and its customers.
>
> * * *
>
> In summary, the additional investment includes technology to better align field conditions and maps to the digital representation of the grid, integration between asset systems, new data models to support planning and operations topology and characteristics, and advanced analytics to leverage sensor data to continuously improve the Network Model.

7 Tr 1536-1537. DTE Electric claims that if it does "not make these additional investments, the Company will require additional O&M personnel to manually maintain data between systems, which will introduce more opportunity for incorrect data entry and discrepancies between asset systems. The value of the components of the ADMS depends directly on the accuracy of this data." 7 Tr 1499-1500.

Although the company provided a description of the program and its potential value, DTE Electric did not clearly discuss how the increased cost associated with this program provides benefits to customers commensurate with the investment. In addition, DTE Electric failed to detail the criteria by which the company decides which new technologies and processes provide the most benefit for maintaining data. Without such criteria, the company may continuously invest in new technologies and processes without prudently demonstrating the rationale and benefits.

Accordingly, the Commission finds that DTE Electric's description of the ADMS: NMS program and the proposed capital expenditures to be a high-level estimate that lacks an appropriate BCA and detail explaining the company's decision-making process for investments in the network model. The Commission finds that the Staff's 20% disallowance for "high-level costs" and its "other cost" adjustment to be reasonable and prudent and should be adopted.

iv. System Operations Center: Electric System Operations Center and Alternate System Operations Center (B5.4, Page 11, Lines 4 and 5)

DTE Electric noted that the purpose of the system operations center (SOC) modernization project is to replace the company's primary SOC and smaller, backup SOC with two new facilities: the Electric System Operations Center (ESOC) and the Alternate System Operations Center (ASOC). More specifically, the company explained that the existing SOC has several limitations:

- Outdated facility: The facility lacks the redundancy in mechanical and electrical systems that is necessary to ensure continued operations in the event of a crisis.

- Outdated technology: The SOC utilizes a magnetic tile board representation of the electric network, as opposed to an electronic display board of the transmission, subtransmission, and distribution network that is now common in the industry. This severely limits situational awareness, which is critical to understand the current status of the system. The tile map board, located on a vertical wall inside the facility, is also running out of space to accommodate growth and limits training opportunities. Whenever a change occurs on the system, which happens many times per day, an employee must manually mark open and shut circuits by placing a magnetic marker on the wall with a 20+ foot pole.

- Space limitations: DTE Electric's SOC and dispatch personnel are physically separated, causing the use of repeated phone calls to communicate. The colocation of SOC and dispatch personnel is a well-established industry best practice and provides customer benefits in terms of improved speed to resolve trouble.

- Limited visibility of telecommunication infrastructure performance: The reliability of the telecommunication paths from field devices to the SOC is critical for the effective monitoring of the grid and remote operations. Developing the ability to separately monitor the condition of the telecommunication network through the construction of a Network Operations Center (NOC) is part of the SOC Modernization project.

7 Tr 1519-1520. DTE Electric stated that the project was initiated in 2017, and the planned completion and occupancy for ESOC was December 2019 and for ASOC, December 2020. The company noted that the ESOC is complete "and about half of the Operational Engineering employees are now working in the space, and IT is installing the remaining equipment . . . ." 7 Tr 1520.

DTE Electric noted that in Exhibit A-12, Schedule B5.4, the capital expenditures for the ESOC and ASOC are on two separate lines for 2020-2023. The company explained that:

> The ESOC costs presented total $65.9 million and the ASOC totals $34.5 million. Table 5 displays the amounts presented in this instant case plus the historical investment for previous years to show the new total costs associated with these two projects. The new total cost for the ESOC is $98.5 million (historic 2017-2020 plus projected 2021 and 2022 investments), indicating an increase of $20.5 million over the original projected investment. The new total costs [sic] for the ASOC is $34.5 million, indicating only a slight increase of $1.5 million over the original plan submitted for approval. As displayed in Table 6, the total increase in costs for the two facilities is $22.1 million for the years 2017-2023, to be included in rate base. The increased cost of the ESOC was driven by the construction delays due to COVID and several other items described below. The Company is proposing to include an incremental $22.1 million in the rate base.

7 Tr 1522. DTE Electric asserted that the other items that contributed to the cost increase were a new IT datacenter with additional integration efforts, added testing and permitting, and an increase in square footage. Specifically, the company stated that the square footage of the ESOC was increased to accommodate additional personnel because, after "benchmarking other utilities, DTE Electric determined that additional benefits could be realized if critical support personnel were

also co-located within the ESOC." 7 Tr 1524. Furthermore, because additional personnel were relocated to the ESOC, the company needed to build out a fully integrated datacenter, which included "additional material investments for that location including HVAC [heating, ventilation, and air conditioning], Equipment racking, cabling, servers, storage, and all of the other support equipment needed to activate a modern datacenter for this facility while meeting all of the NERC certification requirements." 7 Tr 1526-1527. DTE Electric stated that the only components of the ESOC that are yet to be completed relate to the NERC aspects of the facility.

Regarding the ASOC, DTE Electric contended that it is a backup facility in the event that the ESOC is unavailable. The company explained that:

> The new backup SOC, also known as the ASOC, will have the appropriate square footage required to co-locate personnel and will have the appropriate mechanical and electrical system redundancies, as discussed previously in my testimony. In addition, the new ASOC will also be outfitted with the same ADMS technology (including a video wall) as the new ESOC for seamless operations during the transition between facilities. This will allow the Company to continue the use of the electronic records of the Network Model rather than reverting to a paper version as is used in the current backup facility.

7 Tr 1528. DTE Electric noted that the ASOC will be constructed at the same location as the company's proposed new Waterford service center to collaborate construction and reduce costs. Finally, the company stated that "[a]t present, the ASOC project is in the planning and conceptual design phase." 7 Tr 1529.

In the Attorney General's opinion, the project delays and excess costs are a result of the company's missteps, and she requested that the Commission disallow $20.5 million for ESOC and ASOC capital expenditures. She stated that because DTE Electric reevaluated the project after submitting its proposals in previous rate cases and decided to significantly change the scope, this "shows the Company made a proposal for funding to the Commission that was still incomplete and premature." 8 Tr 4771-4772 (footnote omitted). In addition, the Attorney General contended that the company has failed to demonstrate the benefits of these cost overruns. *See*, 8 Tr 4772-4773; *see also*, Attorney General's initial brief, p. 53. Moreover, she asserted that "due to the work flexibility offered to employees due to Covid-19, approximately half of the operational engineers and SCADA support staff are not making regular use of the space in the ESOC built for them and will work remotely. This development partially negates the need for the large square foot expansion of the building." 8 Tr 4773.

Similar to the Attorney General's criticisms, the Staff stated that "[n]ot only has the Company failed to quantify these additional benefits, which may or may not be substantial, it has also failed to indicate that further co-location of additional Company personnel at the ESOC is well-established industry best practices." 8 Tr 5200; *see also*, Staff's initial brief, p. 63. The Staff noted that the redesigned ESOC has more square footage than the average benchmarked SOC and "has over 4,680ft^2 more than required to support co-location of the 60 employees." 8 Tr 5202 (footnote omitted). The Staff also asserted that approximately 50% of the co-located employees are working remotely, which weakens the company's argument that its employees needed to be co-located to improve face-to-face communications, efficiency, and collaboration. Furthermore, the Staff argued that the decision to delay the construction of the ESOC to add the mezzanine as an aesthetic improvement undermines DTE Electric's contention that the ESOC is urgently needed to improve "grid operations, reliability, and outage recovery." 8 Tr 5207; *see also*, Staff's initial brief, p. 65. Therefore, the Staff contended that the company failed to demonstrate that the additional funds for the ESOC are reasonable and prudent and recommended a capital disallowance of $14.37 million for the 22-month bridge period and $62,000 for the projected test year. 8 Tr 5207.

For the ASOC, the Staff asserted that "[t]he Company previously projected ASOC spending in Case No. U-20561 when it was in a conceptual design phase. These costs were approved, included in rates, and did not materialize." 8 Tr 5208. Because the project is still in the conceptual design phase in this case, the Staff expressed skepticism that the costs will actually occur. As a result, the Staff recommended that 2/3 of the SOC: ASOC projected expenditures be disallowed, which results in a $5.93 million disallowance for the 22-month bridge period and a $14.42 million disallowance for the projected test year. 8 Tr 5208. However, the Staff stated that "given the Company's lack of historic spending on the ASOC project despite approval in rates, the ALJ and Commission could adopt a full disallowance of ASOC costs," which the Staff claimed "is better supported by the evidence in this case, addresses the Company's rebuttal concerns, and best protects ratepayer interests." Staff's initial brief, p. 68.

In response, DTE Electric stated that the increased square footage is needed to co-locate critical support personnel at the ESOC. *See*, 7 Tr 1524; *see also*, DTE Electric's initial brief, pp. 98-99. The company contended that "[o]n any given day there will be up to 50% of the team on-site and the remainder working remotely. All of the Employees will participate in an on-site/remote work rotation. At any time, the full team can be required to work at the site as the team mission requires." Exhibit A-46, Schedule KK3, p. 9. In addition, the company asserted that several collaboration rooms, an emergency operations room, and a training area were added to the design of the ESOC, which DTE Electric claimed is consistent with benchmarking results. The company disputed the Staff's claim that DTE Electric considered aesthetics when it decided to increase the size of the ESOC and argued that, instead, "the redesign was driven by operational efficiencies." 7 Tr 1549. The company averred that it provided adequate support for the proposed

ESOC capital expenditures and requested that the Commission reject the Attorney General's and the Staff's proposed disallowances.

Regarding the ASOC, DTE Electric asserted that the Staff did not provide "any supporting data or analytics on how [it] derived the 2/3 disallowance." 7 Tr 1550. The company also noted that, significantly, the Staff did not argue that the ASOC is not needed or is imprudent. *See*, DTE Electric's initial brief, p. 99. Therefore, DTE Electric requested that the Staff's proposed and alternative disallowances for the ASOC capital expenditures be rejected.

To begin, the ALJ determined that "it is premature to include any funding for the ASOC. As Staff argues, DTE [Electric] is still in the preliminary design stage, it does not anticipate groundbreaking until 2023, and has a history of not executing this project as planned." PFD, p. 251. For the ESOC, the ALJ found that the company did not provide sufficient support for the expanded facility and additional capital expenditures. She stated that:

> DTE [Electric]'s credibility regarding the basis for its design is impaired by its failure to provide the benchmarking data that it claims to rely on to support the size of the facility and the colocation of the additional employees not envisioned in the original plan. The company's claim is further impaired by its disavowal of the benchmarking information it provided to Staff on request. As Staff argues, in Exhibit S-7.22, DTE [Electric] stated that it was providing "[t]he benchmarking data compiled when in the design phase of the ESOC." While Staff asked for information on the number of employees working in each of the identified utility centers, DTE [Electric]'s response noted that "the Company does not have the number of people working within the centers on a daily basis." This limited amount of information contradicts DTE [Electric]'s claim to have undertaken extensive benchmarking, as [the company] stated as the basis for the ESOC design and redesign.

PFD, p. 252 (quoting Exhibit S-7.22 and Exhibit A-46, Schedule KK3, p. 7) (footnote omitted).

The ALJ asserted that, to support its proposed expenditures, the company appears to rely on the Commission's approval of the ESOC in Case Nos. U-20162 and U-20561. She reviewed Case No. U-20561 and noted that, in testimony, the company acknowledged that the SOC project had been delayed because of design adjustments and the timing of permits but contended that construction had begun on May 28, 2019. However, the ALJ stated that, "DTE [Electric] did not revise its expense projection in that case, which indicates that the cost overruns it now blames on design changes were either known to DTE [Electric] at the time it filed that rate case in July 2019, and DTE [Electric] misrepresented the associated costs, or they were merely cost overruns that DTE [Electric] has failed to explain on this record." PFD, p. 253. Moreover, she asserted that, in response to the Staff's question of why, at the outset of this project, was it unknown that a larger facility was required and that personnel needed to be co-located, DTE Electric stated that "[a]t the time of [Commission] Case No U-20561, the ESOC was in the initial design phase. The Company continued to evaluate learnings from benchmarking and determined the importance of the co-location of other critical support personnel. The Company has not calculated cost savings due to the co-location of these additional employees." PFD, p. 254 (quoting Exhibit A-46, Schedule KK3, p. 2).

The ALJ also noted that, in response to the Staff's questions of "when the Company learned that it is more efficient to have all critical personnel who work on Control Room processes in the same facility," and "why the Company did not find it important to have additional critical support staff co-located with other Control Room staff in its original design of the new ESOC," DTE Electric did not provide a relevant answer. PFD, p. 253 (quoting Exhibit A-46, Schedule KK3, p. 6). She noted the company's response:

> DTE [Electric] continuously adapts to the needs of its customers and changing regulatory requirements such as those presented in FERC [Federal Energy Regulatory Commission] order 2222. It continually benchmarks other utilities based on these changes to better understand what is needed to operate and maintain the future ADMS system and the grid of the future. This additional benchmarking with EPRI [Electric Power Research Institute] member utilities surfaced the criticality that having support roles in ESOC has on meeting these needs through collaboration and real time support of these personnel in ESOC.

PFD, pp. 253-254 (quoting Exhibit A-46, Schedule KK3, p. 6). In conclusion, the ALJ recommended that the Commission adopt the ESOC disallowance proposed by the Staff and the Attorney General.

DTE Electric excepts, arguing that it fully supported the capital expenditures for the ESOC and the ASOC and that the Commission should reject the ALJ's recommended disallowance. DTE Electric states that the ESOC is almost complete; construction of the ASOC is necessary as a back-up facility; and the company's benchmarking analysis and operational needs support the design, scope, and cost of the project. *See*, DTE Electric's exceptions, pp. 110-114.

In exceptions, the Staff responds to the ALJ's recommendation that the Commission adopt the disallowance recommended by the Staff and the Attorney General for the ESOC. The Staff notes that "the Attorney General's recommendation of [a] $20.5 million disallowance is larger than Staff's recommendation. The Attorney General's recommendation is also based on the Company's discovery responses, as documented in the record. Staff's recommended disallowance is based on calculations with assumptions." Staff's exceptions, p. 4. The Staff recommends that the Commission select one disallowance or the other.

DTE Electric replies that the Staff's recommendation should be rejected for the reasons set forth in the company's exceptions. *See*, DTE Electric's replies to exceptions, p. 16.

In reply, the Attorney General contends that, in DTE Electric's exceptions, the company merely reiterates the arguments set forth in testimony and fails to provide analysis or discussion in support of the company's claim that the ALJ erred in her recommendation. *See*, Attorney General's replies to exceptions, pp. 39-40. She requests that the Commission "adopt full disallowances for both the ASOC and the ESOC, as recommended by the ALJ." *Id*., p. 40.

The Commission notes that, according to the company, the ESOC project is almost fully operational:

> The only remaining items to be completed are related to the NERC aspects of the facility and include turning on the NERC Physical Perimeter Barrier, activation of Electronic Security Barriers, separation of EMS/GMS applications, and the formal NERC certification of the control room. Formal NERC certification is required before the Control Room Operators may move into the ESOC and operate the EMS system in day-to-day operations. The Company is on track to complete these last items and be fully operational by the end of the first quarter 2022.

7 Tr 1527. The Commission finds it reasonable and prudent to approve DTE Electric's proposed capital expenditures to complete the ESOC project to meet NERC certification requirements.

However, the Commission notes that the total cost of the ESOC, $98.5 million, is significant for customers and is concerning, particularly given the many other elements of DTE Electric's distribution system that need improvement. Thus, the Commission expects that the alleged benefits of the ESOC, such as enhanced customer reliability and faster storm restoration and communication, will be maximized by the company to demonstrate that the benefits are commensurate with the cost. In addition, the Commission continues to encourage DTE Electric to rigorously prioritize among the many investment opportunities in its distribution system in order to ensure that customers achieve maximum benefit and value for the dollars involved. Finally, given the ultimate cost of the ESOC, the Commission expects the company to identify methods to ensure it can continue to operate the ESOC without seeking additional investment tied to IT or other cost categories from customers.

Regarding the ASOC, the Commission finds that the ALJ's findings and recommendation should be adopted. As noted by DTE Electric, the ASOC was in the planning and conceptual phase when it was presented in Case No. U-20561. *See*, 7 Tr 1528-1529. In the immediate case, DTE Electric acknowledges that the project is still in the planning and conceptual phase. *See*, 7 Tr 1529. Therefore, the Commission finds that it is not reasonable and prudent to approve the capital costs for the ASOC at this time.

v. Grid Automation Telecommunications (B5.4, Page 11, Line 6)

DTE Electric noted that there are devices on its system that cannot be remotely monitored and controlled, or the devices are connected to a network that is not fully integrated. The company stated that where the devices are connected to a communication network, the connection is comprised of varied equipment and technology, including fiber, microwave, leased phone lines, and radio, with some of the equipment having become obsolete and not repairable. *See*, 4 Tr 349. In addition, DTE Electric asserted that the communication on this network consists of point-to-point communication, which is not as reliable as mesh technologies. Thus, the company contended that "[t]he Grid Automation Telecommunication program is designed to address these communication gaps and to deploy a consistent channel with sufficient and reliable bandwidth to meet the current and growing requirements of a modern electrical system and to allow the deployment of the appropriate cybersecurity protocols." 4 Tr 349.

DTE Electric asserted that it will strategically extend the existing fiber ring into prioritized locations that provide the most benefit. *See*, DTE Electric's initial brief, p. 78. The company averred that it:

> plans to install approximately 500 miles of fiber and 30 routers for 230 substations and other critical locations under the program in the next five years. In 2021, approximately 27 substations were connected through seven new routes in Detroit, Downriver, Dearborn, Redford, Port Huron, Royal Oak, Troy, and two service center microwave towers with approximately 72 miles of fiber. Additionally, microwave tower transmitters and Wimax pole top transmitters were replaced to mitigate Federal Communication Commission (FCC) frequency band reallocations for Wi-Fi and 5G cellular that will degrade the capability of the existing systems to unacceptable performance levels. In 2022, approximately 200 miles of fiber connecting 100 substations and other locations is planned.

4 Tr 350. According to DTE Electric, the program will “fully support the increased functionality that will be brought by [DMS] within ADMS,” allow “greater resiliency during weather events and in cases of equipment failure,” and reduce cyber risk. 4 Tr 350-351. The company proposed capital expenditures of $21.46 million for the 22-month bridge period and $18.38 million for the projected test year.

The Staff objected to DTE Electric’s proposed capital expenditures, asserting that “[a]s of March 2022, the Company has spent about 14% of the total capital for the program,” which “is only about 36.9% of the total projected capital project costs for this period.” 8 Tr 5209. The Staff contended that at the current rate of spending, it is unlikely that DTE Electric will spend the amounts projected in this case. Therefore, the Staff recommended “that only the current percentage of spend (36.9%) be approved for the projected periods. This yields a capital disallowance of $13,536,406 in the projected bridge period and $11,594,434 in the projected test year.” 8 Tr 5209.

In response, DTE Electric disagreed with the Staff’s proposed disallowances, stating that the Staff “performs an inaccurate average of ‘% Projected Cost Actually Spent,’ and then applies [its] analysis inconsistently across the projects analyzed.” 4 Tr 461.

The ALJ found that the “Staff’s reduction reasonably tailors the future projections to the current pace of spending, and should be adopted.” PFD, p. 255.

DTE Electric excepts, arguing that it is not “appropriate to calculate this disallowance based on historic spending . . . .” DTE Electric’s exceptions, p. 86. The company asserts that the Staff’s methodology for the proposed disallowance is flawed because historical spending is not a reliable forecast of future spending, the Staff’s average of percentages produces skewed results, 2020 and

2021 had unique challenges, and DTE Electric has implemented strategies to improve planning and project execution.

The Commission finds that the ALJ's findings and recommendation should be adopted. As pointed out by the Staff, in the first quarter of 2022, DTE Electric had only spent "about 14% of the total capital for the program." 8 Tr 5209. The Commission agrees with the Staff and the ALJ that the company is not on pace to spend the amounts projected in this case. However, if spending occurs above the amount approved in the instant case, the company has the ability to submit reasonable and prudent costs for approval in a future rate case.

vi. Conservation Voltage Reduction/Volt Var Optimization (B5.4, Page 11, Line 11)

DTE Electric explained that VVO "manages system-wide voltage levels and reactive power flow to achieve one or more specific operating objectives. The objectives can include reducing losses, managing voltage volatility due to intermittent renewable generation, optimizing operating parameters, and/or optimizing power factors." 4 Tr 355. The company stated that CVR is a VVO option and its purpose is to maintain customer voltage levels in the lower segment of the acceptable voltage range, which helps to reduce system losses, peak demand, and energy consumption.

DTE Electric asserted that its CVR/VVO pilot was pre-approved in Case No. U-20471 and, to implement the pilot on specific circuits, the company will need two technology upgrades: (1) enhanced "remote monitoring and control capability at substations and on circuits," and (2) "install[ed] or upgrade[d] line capacitor banks to improve voltage conditions." 4 Tr 356. According to the company, all field testing and measurements were completed in the second half of 2021; the evaluation, measurement, and verification (EMV) phase is progressing and all pilot field construction has been completed; the EMV phase and final economic evaluation of the pilot were to be completed in 2021; and an experienced third-party vendor for the EMV phase has been hired. *See*, 4 Tr 357. The company stated that it "plans to continue investments in CVR/VVO in 2022 and beyond" and "invest in a more advanced approach to CVR/VVO, where set points for substation transformer LTCs [load tap changers], capacitor banks and regulators are coordinated and adjusted dynamically to optimize the voltage levels on a real-time basis to maximize demand and energy savings." 4 Tr 357; *see also*, DTE Electric's initial brief, pp. 78-79. Exhibit A-12, Schedule B5.4, page 11 shows that DTE Electric spent $4.5 million in 2021 for CVR/VVO, and the company proposed capital expenditures of $10.34 million for the 22-month bridge period and $15.67 million for the projected test year.

Relying on DTE Electric's discovery responses set forth in Exhibits S-16.7 and S-16.8, the Staff asserted that the company provided a list of circuits and substations that have been or will be upgraded with CVR/VVO in 2021 and 2022, however, the Staff contended that DTE Electric has yet to identify the circuits and substations to be upgraded in 2023. The Staff averred that "ratepayers should not have to pay for projects that are at such a preliminary stage that their locations are not even known" and, thus, proposed a disallowance of $14.5 million for the projected test year. 8 Tr 5433. Additionally, in DTE Electric's next rate case, the Staff recommended that the company provide:

1) actual and projected capital expenditures for CVR for every year from 2019 through the test year;

2) actual and projected O&M expenses for CVR for every year from 2019 through the test year;

3) annual energy savings;

4) cumulative energy savings;

5) annual customer cost savings;

6) cumulative customer cost savings.

8 Tr 5434; *see also*, Staff's initial brief, p. 47.

The company disagreed with the Staff that the CVR/VVO project is at a preliminary stage. DTE Electric stated that:

> The Company began the CVR/VVO project in 2019 by conducting field verification and detailed engineering studies on 18 circuits fed from six transformers, Exhibit A-23 Schedule M1 page 397. Since that time the Company has successfully invested to forecasts through 2021, investing $4.6 million (Exhibit A-41 Schedule FF9 page 9 line 11) against a forecast of $4.5 million (Exhibit A-12 Schedule B5.4, page 11 line 11). Additionally, the Company maintains a prioritized list of substations for CVR/VVO based on expected energy savings, which currently has 17 substations and 126 circuits identified for 2023.

4 Tr 488; *see also*, DTE Electric's initial brief, p. 79. The company asserted that it has an established practice of identifying circuits in the third quarter of the year, which has allowed DTE Electric adequate time to plan for the work to be done in the coming year and has permitted the company to select the most optimal circuits for the program.

The ALJ found that the Staff's recommendation should be adopted. She stated that "[t]he Commission has made clear that placeholders with lists of potential projects for the utility to choose from do not justify including ratepayer funding in rate base." PFD, p. 257.

In exceptions, DTE Electric objects to the ALJ's recommendation, asserting that "this is an established program as Staff acknowledged, the program has an undisputed track record, and there is no basis to think that the program will simply stop in 2023 as the [ALJ] effectively suggests, given the mature stage of the program." DTE Electric's exceptions, p. 88. Additionally, the company claims that the Staff did not express concern about the reasonableness of the program or that it lacks customer benefits. Rather DTE Electric contends that "[t]he sole basis for the Staff's proposed disallowance concerns the timing of identifying specific circuits for 2023." *Id*. The company reiterates the reasons why DTE Electric waits to identify the circuits to be included in the project until the third quarter of the year and requests that the Commission reject the ALJ's recommendation.

The Commission finds that the ALJ's findings and recommendation should be approved. The Commission agrees with the ALJ that the proposed expenditures appear to be placeholders for work that has yet to be identified or completed on this project. Therefore, the Commission finds it reasonable and prudent to adopt the Staff's proposed disallowance for the projected test year. In addition, the Commission adopts the Staff's recommendation that, in the company's next rate case, DTE Electric shall provide the following for CVR/VVO:

1) actual and projected capital expenditures for CVR for every year from 2019 through the test year;

2) actual and projected O&M expenses for CVR for every year from 2019 through the test year;

3) annual energy savings;

4) cumulative energy savings;

5) annual customer cost savings; and

6) cumulative customer cost savings.

vii. Non-wires Alternative: O'Shea Energy Storage (B5.4, Page 11, Line 12)

DTE Electric generally described the company's long-term plan for incorporating NWAs into the distribution planning process. *See*, 4 Tr 369. DTE Electric asserted that it developed NWA pilots pursuant to the directives in Case No. U-20147.

Next, the company explained that the O'Shea energy storage project involves installing a 1 MW x 1 MW-hour battery, along with a solar array, at O'Shea Park in Detroit. *See*, 8 Tr 5209. According to the company, the purpose of the O'Shea energy storage pilot is to "[t]est effectiveness of storage to address voltage instability due to intermittent solar." Table 17, 4 Tr 366. DTE Electric noted that it spent $493,000 on the O'Shea energy storage project in 2020 and $1.1 million in 2021. 4 Tr 469; *see also*, Exhibit A-12, Schedule B5.4, p. 11 and Exhibit A-41, Schedule FF9, p. 9.

The Staff noted that almost all of the materials, including the battery, have been purchased for this project and were included in historical costs. Accordingly, the Staff found that the remaining costs are for labor and determined that those costs are "about 2.8 times the amount spent on project materials," which the Staff found "surprisingly high." 8 Tr 5210. The Staff noted that, in 2020, the U.S. Department of Energy (DOE) published a report that provided the costs of battery storage projects in 2020 and 2030. The Staff stated that, "[e]xamining this data, Staff found the installation costs associated with a 1 MW battery ranged from 9.2 – 12.7% of total energy storage system cost." 8 Tr 5210 (footnote omitted). Because "the projected labor costs far exceed the percentages published by the U.S. DOE for energy storage system costs even for 2030," the Staff recommended a disallowance of $1.29 million for the bridge period and $16,257 for the projected test year for the company's inflated assumed labor costs. 8 Tr 5211.

The ALJ noted that:

> While DTE [Electric] took issue with Staff's adjustment for "other costs" as discussed above, [the company's witness] did not explicitly address the O'Shea project in rebuttal, and DTE [Electric] does not address it directly in its brief. On this basis, given this [ALJ]'s acceptance of Staff's adjustment for the "other" cost category, this [ALJ] finds this issue is resolved and Staff's adjustments to this line item should be adopted.

PFD, pp. 258-259.

No exceptions were filed on this issue. The Commission finds that the ALJ's findings and recommendation are reasonable and prudent and should be adopted.

viii. Non-wires Alternative: Battery Trailer (B5.4, Page 11, Line 13)

On page 259 of the PFD, the ALJ stated that, "[w]hile Staff originally recommended an adjustment to this line item as shown in Exhibit S-7.42, Staff does not pursue this adjustment in its brief, so this [ALJ] considers the issue resolved."

In exceptions, the Staff disagrees with the ALJ that the Staff did not address this issue in briefing. The Staff explains that "[i]nstead of discussing the Technology and Automation projects with these adjustments individually, Staff discusses the totality of each adjustment in brief for simplicity and brevity, as the reasoning for each project is identical." Staff's exceptions, pp. 4-5. The Staff contends that it recommended a disallowance for the project in the discussion of "other costs" for Technology and Automation projects. *See*, Staff's initial brief, pp. 81-88.

No replies to exceptions were filed on this issue. The Commission finds that the Staff's proposed disallowance is reasonable and prudent and should be adopted.

ix. Non-wires Alternative: Omega Load Relief (B5.4, Page 11, Line 14)

DTE Electric stated that the objective of the Omega load relief project is to "[d]eploy storage to address subtransmission loading" and to "[i]nstall [a] battery that can be relocated." Table 17, 4 Tr 365. The company projected $7.1 million for the 22-month bridge period and $670,000 for the projected test year.

The Staff proposed a disallowance of $2.27 million for the 22-month bridge period and $223,000 for the projected test year. The Staff explained that it is recommending "that 1/3 of the NWA: Omega Load Relief project be disallowed to remove costs associated with solar implementation, which Company will not pursue, but is listed as one of the three scope items for the project. Though the Company indicates in discovery that the project scope does not include solar, solar is listed as part of scope in the Company exhibits." 8 Tr 5212-5213 (footnote omitted).

In addition, the Staff proposed that the total labor costs be adjusted to 11% of the total material costs, which aligns with labor percentage in the NWA: battery trailer project. Accordingly, the Staff recommended a $1.7 million disallowance for the 22-month bridge period and a $159,750 disallowance for the projected test year. *See*, Exhibit S-7.31. Finally, the Staff proposed an additional 20% reduction to account for historical underspending in technology and automation projects. *See*, Exhibit S-7.42, p. 2.

DTE Electric disputed the Staff's claim that solar generation is part of the Omega load relief project. The company stated that:

> Initial conceptual engineering scope for the Omega project considered adding solar. However, as stated in Staff Witness Wang's Exhibit – S-7.30 response to STDE-15.35 "The Company will not be pursuing utility scale solar or rooftop solar for NWA Omega load relief project. The project scope and associated costs does not include solar." The Company made clear that the project cost does not include any investment in solar capability through discovery responses such as the one quoted above.

4 Tr 471. In addition, DTE Electric asserted that the labor costs for the NWA: Omega load relief project are higher than the NWA: battery trailer project because the Omega project includes site preparation, whereas the battery trailer project does not. *See*, 4 Tr 472.

In reply to DTE Electric, the Staff noted that Exhibit A-23, Schedule M6, page 52 shows that the project includes solar. The Staff stated that "[i]ncluding costs in rates for activities which the Company declares will not occur is unreasonable and imprudent. Given the contradictory exhibit and discovery information from the Company, Staff asserts the record fails to support the Company's request." Staff's initial brief, p. 72. The Staff also contended that because DTE Electric did not break down its capital costs by scope, the company was unable to perceive that the projected costs included solar. Regarding the company's claim that the labor costs for the Omega and battery trailer projects differ due to "project scope and construction details," the Staff stated that "these details on what the costs cover for each project were provided in rebuttal and not available to Staff prior." *Id*., p. 73.

DTE Electric responded, reiterating that the NWA: Omega load relief project and the NWA: battery trailer have different labor and construction requirements and, therefore, have different costs associated with the projects, including labor. *See*, DTE Electric's reply brief, p. 67.

MI-MAUI/Ann Arbor supported DTE Electric's proposed Omega load relief project but did not address the Staff's concerns with the project. *See*, MI-MAUI/Ann Arbor's initial brief, p. 28.

The ALJ found that the Staff's proposed disallowances, in part, are reasonable. She stated that:

> Neither Schedule M1 of Exhibit A-23 nor Schedule B5.4.5 of Exhibit A-12 present a detailed cost estimate for this project. Schedule M6 provides only an unsupported breakdown of the projected test year expenses of $670,000 into labor, material, and other, less than 10% of the total project cost. DTE [Electric] has acknowledged that its "engineering estimates" are "high level," has not explained how the estimates are determined, and it has not provided a cost breakdown by scope or project step or provided a project timeline. As noted above, DTE [Electric] initially filed its projected 2022 and 2023 spending with a flat 75% labor, 15% material, 10% overhead projection. While Schedule B5.4.5 reports "engineering and design" costs of $0.8 million, the engineering and design phase is not included in the project timeline, which includes only two steps, "install" and "operate."

PFD, p. 261. The ALJ also noted that the company could have amended its exhibits to eliminate the solar components in the Omega project. In any event, she found that DTE Electric did not intend to include a solar component: "Schedule M1, page 411, contains a cost estimate of $7 million for the project, and does not include solar in the project scope. Schedule B.5.4.5 contains a cost estimate of $7.8 million, with a limited breakdown showing: '2 battery systems - $5.7 million; install batteries - $1.3 million; engineering and design - $0.8 million.'" PFD, p. 262. As a result, the ALJ recommended that the Commission reject the Staff's disallowance for the scope of the project but approve the Staff's remaining disallowances.

Regarding the labor costs for the Omega project, the ALJ noted that in Exhibit A-23, Schedule M6, page 54, DTE Electric provides a break-down of the test year expenditures, however no costs are listed for the bridge period, and the company failed to provide an explanation of the allocation. She stated that "DTE [Electric]'s general assertion regarding site preparation being labor intensive is untimely, given all the opportunities—in multiple documents it filed for this project—the company had available to provide meaningful cost detail." PFD, p. 262. Relying on Exhibit S-7.2, the ALJ recommended a $2.48 million reduction to bridge period expenditures and a $234,553 reduction to test year projections.

In exceptions, DTE Electric contends that the ALJ erred in recommending a disallowance for labor costs because the company provided significant cost detail in support, citing Exhibit A-41, Schedule FF9. Additionally, DTE Electric objects to the ALJ's finding that the company failed to sufficiently detail and support the labor costs involved with site preparation. The company states that:

> until Staff filed its testimony, the Company had no reason to suspect that anybody would assert Staff's proposed comparison of this project involving site preparation to a battery trailer project that does not involve site preparation (by rough analogy, like comparing a house to a mobile home). The Company filed a "timely" response in rebuttal, and the Company explanation is beyond credible dispute in light of the indisputable differences between the projects – the Omega project includes site preparation at a real property location (and thus higher labor costs), and the battery trailer project does not include site preparation (and therefore does not include those higher costs).

DTE Electric's exceptions, pp. 95-96. Accordingly, DTE Electric requests that the Commission reject the ALJ's findings and recommendation.

The Attorney General replies to DTE Electric, contending that the ALJ's findings and recommendation are fully supported by the record. She asserts that in DTE Electric's exceptions, the company reiterates the arguments set forth in testimony, which have been addressed by the ALJ. *See*, Attorney General's replies to exceptions, pp. 35-36.

The Commission finds that the ALJ's findings and recommendation should be adopted. The information supplied by DTE Electric provides some details regarding the scope, implementation plan, and cost breakdown for this project, and the Commission agrees with the ALJ that the company did not intend to include solar in the project scope. Therefore, the Commission finds that it would be unreasonable to adopt the Staff's proposed disallowance of $2.37 million for the 22-month bridge period and $223,000 for the projected test year.

However, the ALJ's findings and recommendation regarding the labor costs for the Omega project should be adopted. Exhibit A-23, Schedule M6, page 54, provides a very general break-down of the test year expenditures, but no costs for the bridge period, and there is no explanation for the basis of the labor costs. Therefore, the Commission finds that the ALJ's recommended $2.48 million disallowance for the bridge period and $234,115 disallowance for projected test year expenditures are reasonable and prudent and should be approved.

x. Non-wires Alternative: Fisher Load Relief (B5.4, Page 11, Line 15)

The ALJ stated that "[w]hile Staff originally recommended an adjustment to this line item as shown in Exhibit S-7.42, Staff does not pursue this adjustment in its brief, so this [ALJ] considers the issue resolved." PFD, p. 263.

In exceptions, the Staff disagrees with the ALJ that the Staff did not address this issue in briefing. The Staff explains that, "[i]nstead of discussing the Technology and Automation projects with these adjustments individually, Staff discusses the totality of each adjustment in brief for simplicity and brevity, as the reasoning for each project is identical." Staff's exceptions, pp. 4-5.

The Staff contends that it recommended a disallowance for the project in the discussion of "other costs" for Technology and Automation projects. *See*, Staff's initial brief, pp. 81-88.

No replies to exceptions were filed on this issue. The Commission finds that the Staff's proposed disallowance is reasonable and prudent and should be adopted.

xi. Non-wires Alternative: Port Austin Load Relief (B5.4, Page 11, Line 16)

DTE Electric noted that, during the summer of 2022, there was a risk of a significant outage at Omega because traditional upgrades will not be complete before the summer peak. Although the company has accelerated traditional projects to increase capacity, DTE Electric explained that "[t]he use of the mobile batteries to manage demand was selected as an alternative to mitigate the risk, develop the use of the technology, and prepare the equipment for re-deployment for other pilot use cases." 4 Tr 368. The company asserted that, after the traditional upgrades at Omega are completed, one of the battery systems will be moved to Port Austin to address a substation that is over its firm rating and relieve voltage concerns. DTE Electric stated that an alternative to moving the battery system to Port Austin would be "to convert the substation and circuits from 4.8kV to 13.2kV as part of the Conversion program. The construction at Port Austin will be done with conversion expected in the future, but the NWA option provides the opportunity to defer this investment to better meet the current and expected load, as well as other priorities." 4 Tr 368.

The Staff contended that "the NWA: Port Austin Load Relief project is dependent on the successful completion of the NWA: Omega Load Relief pilot. The NWA: Omega Load Relief pilot is expected to be operational by August 2022." 8 Tr 5213 (footnotes omitted). Thus, the Staff recommended that the capital costs for the NWA: Port Austin load relief be excluded from rate base until the successful completion of the NWA: Omega load relief project. The Staff stated that "since only the cost of the solar installation and battery re-use are within this rate case periods, and the solar scope is estimated to cost $2 million, Staff recommends all costs outside of the $2 million be disallowed. This yields a recommended disallowance of $2,083,000 in the test year for the NWA: Port Austin Load Relief project." 8 Tr 5214.

In response, DTE Electric noted that the Staff's proposed $2 million disallowance is tied to the solar scope of the project and another $2.1 million disallowance is for the mobile battery trailer. The company argued that the scope of work for the NWA: Port Austin load relief project involves several phases: "the installation of solar, site preparation including below grade work, overhead construction, and mobile battery transportation and installation." 4 Tr 473. According to DTE Electric, the mobile battery installation is one of the last phases and "[t]he cost associated with the mobile battery transportation and connection is a small fraction of the cost that Staff Witness Wang attributed to the disallowance." 4 Tr 473.

In addition, the company asserted that if there are delays with the Omega project, it will not prevent DTE Electric from completing the Port Austin project. The company stated that "[t]he Port Austin project scope is a combination of solar plus storage and is designed as a combination to address a capacity concern. A solar installation alone will not resolve the concern. As described in Exhibit A-23, Schedule M1 page 409, both storage and solar are needed to address the loading situation." 4 Tr 474. DTE Electric contended that because there is sufficient time between the completion of the subtransmission line upgrades at Omega and the installation at Port Austin, that there should not be significant delays with the Port Austin project. In the event the Omega battery is not available, the company stated that the Port Austin project is still necessary and DTE Electric would "simply procure a new battery, the costs of which would exceed the currently expected battery transportation costs." 4 Tr 474. Therefore, the company argued that there is no basis for the Staff to assume that the costs for this project will not materialize.

MI-MAUI/Ann Arbor supported DTE Electric's proposed NWA: Port Austin load relief project but did not address the Staff's concerns with the project. *See*, MI-MAUI/Ann Arbor's initial brief, p. 28.

The ALJ asserted that DTE Electric failed to demonstrate that the actual capital expenditures for the NWA: Port Austin load relief project align with the forecasted amounts. She stated that "DTE [Electric] has not established that this program is expected to be in place during the projected test year." PFD, p. 265. In addition, the ALJ noted that the $4.5 million projected for the Port Austin project is not broken-down into specific items such as land acquisition, site preparation, or engineering costs. She stated that "[a] review of DTE [Electric]'s rebuttal exhibit, Exhibit A-52, page 12, shows no money spent in 2021 on this project, so it is unclear whether the limited timeline provided is still on track, including whether the engineering has been completed to produce a more accurate cost estimate." PFD, pp. 265-266. Moreover, the ALJ asserted that in the company's DGP, the Port Austin project pilot has specific goals such as testing solar and storage as a solution for substation capacity issues and to test the redeployment of a stationary battery from Omega to Port Austin. She contended that "[p]art of the pilot goals would be abrogated if DTE [Electric] were to procure a new battery due to time constraints." *Id*., p. 265. Therefore, the ALJ found the Staff's proposed adjustments to be reasonable and prudent.

On page 97 of its exceptions, DTE Electric asserts that the ALJ's contention "that the future might not develop as planned cannot support a decision." In addition, the company argues that the ALJ failed to acknowledge that the project is in the last phase, and, in any event, the Commission is not required to determine that the project will be "used and useful" in the projected test year. *See*, *id*. DTE Electric avers that it provided sufficient support for the project's capital expenditures and requests that the Commission reject the ALJ's recommendation.

The Commission finds that the ALJ's findings and recommendation are reasonable and prudent and should be adopted. The Staff contended that the Port Austin load relief project cannot be completed until the Omega load relief project is complete, which is expected in 2023, absent any delays. *See*, 4 Tr 368, 474; 8 Tr 5213. However, at the time of filing this case, DTE Electric could not confirm whether or not there would be delays. *See*, 4 Tr 474. The company asserted that, if there were delays or the Omega battery becomes unavailable, it "would simply procure a new battery, the costs of which would exceed the currently expected battery transportation costs." 4 Tr 474. As noted by the ALJ, if DTE Electric must purchase a new battery, it defeats one of the stated goals of the pilot: "'[t]est redeployment of stationary battery from Omega.'" PFD, p. 265 (quoting Exhibit A-23, Schedule M1, p. 403). Therefore, because the Omega project is not expected to be complete until 2023, the company is unable to predict whether there will be delays, and the purchase of a new battery would be contrary to a goal of the Port Austin project and result in surplus expenditures, the Commission finds that it is premature to approve the capital expenditures for this project. The Commission finds that the Staff's proposed disallowances should be approved.

xii. Non-wires Alternative: Veridian (B5.4, Page 11, Line 17)

DTE Electric stated that the purpose of the NWA: Veridian pilot is to "[d]evelop secure and effective methods to interface and control behind the meter (BTM) DER in conjunction with utility scale DER" and that the timing of the pilot is 2021 to 2025. 4 Tr 365, Table 17. For the Veridian pilot, the company projected $1.53 million for the 22-month bridge period and $4.95 million for the projected test year. Exhibit A-12, Schedule B5.4, p. 11. DTE Electric contended that "[t]he pilots are fully described in Exhibit A-12 and the DGP, Section 12.7, starting at page 392." 4 Tr 364.

The Staff claimed that "[t]he NWA: Veridian project does not have internal Company approval. The Company is awaiting approval of the customer's approved plans." 8 Tr 5176. Accordingly, the Staff recommended a full disallowance of the Veridian project capital expenditures. However, the Staff commended DTE Electric "for working closely with customers to support the creation and successful implementation of developments like Veridian. Should the Company approve a[n] NWA pilot at Veridian at a future date, it may always request recovery of such costs in a future rate case given proof of reasonable and prudent costs." 8 Tr 5176.

The company objected to the Staff's proposed disallowance, arguing that the Veridian project has internal company approval. DTE Electric stated that:

> since the initial filing and the Company's response to discovery question STDE-1.35 (Exhibit S-7.4), the Company internally approved the project. In February 2022, the developer officially submitted a request for the residential subdivision; and design for this portion of the project began in March 2022. Following the developer initiating this request, DTE Electric started the conceptual engineering for the microgrid aspects of the project with internal approval for detail engineering being received on May 11, 2022. The microgrid portion of this project, including circuit upgrades are almost ready to begin detail design with construction expected to start early 2023.

4 Tr 476.

MI-MAUI/Ann Arbor supported the NWA: Veridian project, explaining that:

> Ann Arbor finds the general thinking behind the Veridian NWA project to be good: instead of requiring a very expensive standard interconnection for a housing development with very innovative energy elements and high electrification, the interconnection procedures would allow creation of a microgrid that takes advantage of the solar and storage that is behind the meter. DTE [Electric] should be given confidence that it can pursue interconnection of this project in an innovative way. *See* DTE [Electric]'s Br. 84-85.
>
> Ann Arbor also recognizes the troublesome nature of approving costs based on a design that is not final and Staff's concerns regarding the lack of certainty regarding what the end costs will be. Staff Br. at 47. Ann Arbor also recognizes the vital need for certainty for Veridian regarding costs and final design requirements for interconnection in the very near term.

> Given that all parties appear supportive of allowing DTE [Electric] to innovate while hooking up Veridian to the grid, but there are legitimate concerns about approving costs that have not yet been incurred based on a design that may not be final, Ann Arbor recommends the Commission approve the Veridian NWA, but with a provision that requires additional filings by DTE [Electric] in the next rate case regarding the project's execution, with the option of reductions in the revenue requirements in that case if costs exceed current projections.

MI-MAUI/Ann Arbor's reply brief, pp. 19-20.

The ALJ noted that DTE Electric received internal approval for this project on May 11, 2022, eight days before the Staff's testimony was due, but did not provide the approval document in the record. She stated that:

> This is not an academic issue, since DTE [Electric] did not address the open questions raised by the DGP in Schedule M1 and Schedule B5.4.8, both of which DTE [Electric] purports to rely on. In its DGP, DTE [Electric] projected a cost of $8.3 million for this project, and planned partial funding to come from other sources. In the informational chart at page 413 of Schedule M1, under "cost and scope of proposed NWA solution," it states: "Total cost: $8.3 million (DTEE + Developer + DOE Grant) plus additional private and public funding." This chart also includes, under "assumptions in analysis," the following statement: "In progress – details of the development and loading are still in early phases."

PFD, p. 268. She also noted that Exhibit A-12, Schedule B5.4.8 provides estimated costs for the project "based upon currently-known scope" but fails to sufficiently explain the sources of funding for the project. PFD, p. 268. The ALJ stated that, "[a]s Staff argues, and as MI MAUI and Ann Arbor seem to recognize, it is premature to include funding for this project in rates." *Id.*, p. 269.

In exceptions, DTE Electric argues that it sufficiently supported the proposed capital expenditures for this project. The company states that "the [ALJ]'s primary reason for a proposed disallowance – that the Company did not present the approval document – lacks relevance because it is undisputed that the project is approved." DTE Electric's exceptions, p. 98. In addition, DTE Electric contends that the ALJ's claim that it was improper for the company to provide additional information in rebuttal "neglects the entire point of rebuttal." *Id.*, p. 99. Finally, the company disputes that MI-MAUI/Ann Arbor oppose the project, citing MI-MAUI/Ann Arbor's reply brief. DTE Electric requests that the Commission decline to adopt the ALJ's recommended disallowance.

Ann Arbor excepts to the ALJ's findings and conclusions. Ann Arbor asserts that "while recognizing concerns about approving costs that have not yet been incurred based on a design that may not be final, [Ann Arbor] also strongly believes it is important for the Commission, if it does deny those costs, to clearly signal support for the Company's intended innovative approach to Veridian's interconnection." MI-MAUI/Ann Arbor's exceptions, p. 18.

The Commission finds that the focus, scope, and goals of the program are in the public's interest. The Commission further finds that the project has received all necessary internal approvals from DTE Electric, though such approvals were not yet in place when this case was filed. In addition, while some elements of the total project cost and allocations between DTE Electric, the project developer, DOE, and other private and public funding sources continue to be refined, the Commission is persuaded that the projected costs included in Exhibit A-12, Schedule B5.4 for inclusion in rates in this case, namely $1.53 million for the 22-month bridge period and $4.95 million for the projected test year, are well supported on the record. Accordingly, the Commission finds that the costs DTE Electric is seeking in the present case are reasonable and prudent and should be approved. The Commission will continue to monitor these costs as the project proceeds and additional details are available and commends the company for working with customers to pursue this type of project.

xiii. Non-wires Alternative: Small Solar and Storage Testbed (B5.4, Page 11, Line 18)

Pursuant to Exhibit A-12, Schedule B5.4, page 11, DTE Electric proposed capital expenditures for NWA: small solar and storage testbed of $678,000 for the 22-month bridge period and $292,000 for the projected test year. Exhibit A-12, Schedule B5.4.9, page 1 stated that the "[p]ilot goals and desired learnings" are:

> • The project will allow validation of behavior, interaction and compliance of the new features for smart inverters and act as a location to test new features and capabilities while also serving as a training platform for DTEE engineers, technicians and field employees[.]
> • Smart inverters are also capable of providing voltage and reactive support in either a passive or actively controlled mode. As the testing standards in IEEE [Institute of Electrical and Electronics Engineers] 1547.1-2020 on smart inverters are finalized and interoperability standards such as IEEE2030.5 evolve and reach the market[.]
> • The lab facility will support several evaluations and will be continually updated to demonstrate technology interoperability and the processes and technologies to integrate customer resources into the grid[.]

In addition, Exhibit A-12, Schedule B5.4.9, page 3 noted that engineering, design, and site preparation for the project is proposed for 2021; engineering and construction is proposed for 2022; and construction completion and demonstration commencement is proposed for 2023. DTE Electric did not specifically address this project in direct testimony.

Although the Staff expressed appreciation that DTE Electric is studying smart inverters and the integration of small solar and storage, the Staff was concerned that the project, as currently proposed, "solely focuses on studying these technologies in a test facility instead of the actual systems currently in operation and being installed within its service territory." 8 Tr 5178. The Staff contended that it is unnecessary for the company to first test these technologies in a test bed or laboratory because DTE Electric can rely on the findings and learnings of EPRI, other utilities, and the company's prior experience with smart inverters.

The Staff also noted that the NWA: small solar and storage testbed pilot is expected to conclude at the end of 2023 and DTE Electric plans to keep the pilot installations at the company's Technical Development Center for use in employee training, technology demonstrations, and future testing. The Staff contended that, although it:

> understands there may be potential benefits from training or technology demonstrations, the Company provided no assessment of the benefits and costs in comparison to a scenario where the solar and storage technologies are installed in the field and continue to function for the duration of their life. Staff suspects that the technologies will provide greater benefit to ratepayers and the resiliency of the electric grid by being utilized for their full lifetime rather than by serving as showpieces at a Company site or being tested until failure after the conclusion of the project in 2023, as currently planned.

8 Tr 5182 (footnote omitted). The Staff recommended that if DTE Electric revises the pilot design, there may be opportunities to analyze potential new business models and possible installation of these technologies at low-income households to evaluate the impact on disparate circuits and communities.

In response, DTE Electric argued that it may not be feasible to test all technologies after installation on the customer's premises because "[s]ome of the interactions and tests" create safety issues, the tests may require the installation of equipment at the customer's premises in addition to the test hardware, the test site requires "highly detailed power quality metering" and the sharing of customer data, and tests require "abnormal electrical system events" and "emerging or not available on the market" capabilities. 4 Tr 477-478. The company also asserted that it has made capital expenditures in 2020 and 2021 for the small solar and storage testbed pilot and provided audit responses, discovery responses, testimony, and exhibits to support the capital expenditures for this project. *See*, DTE Electric's initial brief, p. 82.

The ALJ stated that, although she "acknowledges that DTE [Electric] has not established a firm cost projection for this project, the project cost is minor and [the company's] testimony is persuasive that there are benefits from the project. This [ALJ] concludes the project funding should be included in rates." PFD, p. 271.

The Staff excepts, reiterating that DTE Electric failed to demonstrate that the proposed scope of the project is reasonable and prudent. The Staff states that "greater ratepayer benefit may arise if the project scope were to be altered to study new business models, such as utility or third-party ownership of small solar and storage technologies, or the implementation of solar and storage technologies at low-income households and to study the impact of these technologies on disparate circuits and communities." Staff's exceptions, p. 8. The Staff recommends that the Commission adopt its proposed disallowances.

In reply, DTE Electric states that the "Staff's Exception should be rejected because the record fully supports the [ALJ]'s recommendation as indicated above, and Staff provides no sound basis for a different result." DTE Electric's replies to exceptions, p. 14.

The Commission finds that this project provides enough benefits to justify inclusion in rates. Integration of small solar and storage is a priority of the Commission's MI Power Grid initiative. The Commission also encourages the company to utilize and learn from research done by other entities, particularly those to which they pay dues, such as EPRI, for important research topics such as this.

xiv. Non-wires Alternative: Electric Vehicle Charging Demonstration (B5.4, Page 11, Line 19)

DTE Electric stated that the purpose of the EV demonstration pilot at the ACM is to "[d]evelop control algorithm and conduct testing on an extreme fast charger and its interfaces as well as the development of cyber secure smart charge management capabilities for the [U.S.] Department of Energy." 4 Tr 366, Table 17, line 8.

The Staff recommended a disallowance of 90% of the proposed labor costs for the pilot. The Staff stated that:

> Given that this is a demonstration project of a new technology, there is limited understanding of what the project will require, including the labor required for the Company to support utility interfaces, engineering input, and data collection. The projected cost relies on a high level engineering estimate. As such, the anticipated level of effort is preliminary and largely unknown.

8 Tr 5215. The Staff asserted that its recommendation results in a $414,784 disallowance for the bridge period and a $442,800 disallowance for the projected test year.

GLREA objected to DTE Electric's proposed capital expenditures, asserting that "[t]he Commission should reject pilot proposals that expand Company ownership into equipment types and competitive markets not necessary to the operation of the electric grid, and direct the Company to redesign these programs to avoid Company ownership of equipment." 8 Tr 3252.

DTE Electric disputed GLREA's claim that the purpose of the company's pilot is to own all EV charging stations or all high-power energy consuming devices. Rather, DTE Electric stated that the objective of the pilot is:

> to study the impact of charging stations on the grid, including cyber security. The purpose of the pilot project is clearly laid out in Company Exhibit A-12, Schedule B5.4.10 pages 1 to 4 and Exhibit A-23, Schedule M1 pages 415-416. This pilot has a direct relation to power quality and reliability and should be tested by the Company with Company ownership to allow for the access required to fully study the technology.

4 Tr 486. In addition, the company argued that the Staff's proposed disallowances should be rejected because it is not "reasonable or prudent to propose disallowing an entire group of projects based solely on a concern about a cost-estimating model. This is especially true where the Staff does not question the reasonableness or prudence of the projects themselves." DTE Electric's reply brief, p. 56.

The ALJ found that DTE Electric failed to demonstrate that the proposed capital expenditures for this pilot are reasonable and prudent and, therefore, recommended that the Commission adopt the Staff's proposed disallowances. *See*, PFD, p. 272.

DTE Electric excepts to the ALJ's recommendation. The company requests that the Commission decline to adopt the proposed disallowance "for the same reasons the Company disagrees with other PFD/Staff disallowances based solely on the 'high-level estimate' issues discussed in these Exceptions." DTE Electric's exceptions, pp. 99-100.

The Commission finds that the ALJ's findings and recommendation should be approved. The Commission notes that in Exhibit A-12, Schedule B5.4.10, the cost detail for the pilot project lists expenditures for "engineering and design" and "construction and equipment," but fails to provide a detailed description and breakdown of what these costs entail. In addition, the Commission agrees with the Staff that because this is a study and demonstration project for a new technology, there are many unknowns associated with the project, including labor. *See*, 4 Tr 486; 8 Tr 5215. Thus, the Commission finds that it is premature to approve these costs with the level of detail presented in this case and that the Staff's proposed disallowances should be approved.

xv. Technology Programs and Non-wires Alternatives (B5.4, Page 11, Line 20)

The Staff contended that because the technology programs and NWA "subprojects are all either completed with no ongoing costs or are now separate projects with capital costs included elsewhere in the [Case No.] U-20836 rate case, Staff recommends full disallowance of the projected bridge period capital costs for this project totaling $2,000. There is no projected test year capital cost." 8 Tr 5185.

DTE Electric objected, contending that the Staff mistook completed investments as future investments. The company stated that "[i]nvestments in this category took place in 2021. The Company identified these projects as completed or moved into other categories starting in 2022." 4 Tr 466; *see also*, DTE Electric's reply brief, p. 58.

The ALJ found the Staff's proposal persuasive. She stated that:

> this [ALJ] defers to Staff's recommendation and finds that the $2,000 adjustment should be made. DTE [Electric] chose the 2020 historical year and did not present final numbers for 2021 in its filing. Its discovery response to Staff was arguably ambiguous, but it is the company, not Staff, that has the obligation to support the details of its expense projections. It is also troubling that DTE [Electric] would transfer additional spending for projects in this group to other line items, without providing a reconciliation, making it more difficult to evaluate both this line item and the other line items that now include expenditures for this project.

PFD, pp. 273-274.

In exceptions, DTE Electric disagrees with the ALJ that the company's response was ambiguous. The company asserts that it provided information demonstrating that DTE Electric "made the investment, when it made the investment, and provided the amount of the investment. The [ALJ]'s reasoning is disconnected from the evidence, which instead supports the Company's requested recovery." DTE Electric's exceptions, pp. 100-101.

The Commission reviewed the company's discovery responses in Exhibit S-7.12, pages 1-5 and notes that, according to DTE Electric, these projects are complete or near completion and the company contends that some of the projects have been replaced or moved to other projects. The Commission agrees with the Staff and the ALJ that the company's responses are ambiguous and make it difficult, if not impossible, to evaluate and reconcile the status of these expenditures. As noted by the ALJ, if DTE Electric desires full recovery of its prudently incurred expenditures, the company bears the responsibility of explaining its expenditures, and supporting with sufficient detail, which was not provided for this category of expenditures. Therefore, the Commission finds that the ALJ's recommendation is reasonable and prudent and should be adopted.

xvi. Distributed Energy Resource Management System (B5.4, Page 11, Line 21)

Pursuant to Exhibit A-12, Schedule B5.4, page 11, DTE Electric projected distributed energy resource management system (DERMS) capital expenditures of $2.12 million for the 22-month bridge period and $2.54 million for the projected test year.

The Staff recommended a disallowance of $2.54 million for the projected test year because the company is proposing capital expenditures of $2.5 million for the DERMS implementation project, which the Staff contended is duplicative of the DERMS project. *See*, 8 Tr 5216; *see also*, Exhibit A-12, Schedule B5.7.4, p. 1 and Exhibit S-7.36. In addition, the Staff recommended a 20% disallowance to DTE Electric's proposed bridge year expenditures because of the company's lack of specificity in its "high-level" cost estimate. *See*, Exhibit S-7.42, p. 3.

In response, DTE Electric partially agreed with the Staff that some costs for the DERMS project are also reflected in the DERMS implementation project. However, the company stated that the Staff is "double counting the disallowance by proposing that the funding be taken from both the IT and DO forecasts. The Company recommends that the Commission adopt the disallowance of $2.54 million from the IT forecast and reject the proposed disallowance of the same $2.54 million from the DO forecast." 4 Tr 487.

The Staff disagreed with DTE Electric that it double-counted the disallowance, arguing that the proposed $2.54 million disallowance is for the DO forecast of the DERMS project. However, the Staff stated that it "has another recommended disallowance for the DERMS Implementation IT project for other issues discussed separately . . . which are not duplicative of the recommendation here." Staff's initial brief, p. 78. DTE Electric responded that it agreed "that there should be a reduction from the IT forecast, but the Commission should reject the proposed duplicative disallowance from the Distribution Operations forecast (Pfeuffer, 4T 486-487).” DTE Electric’s reply brief, p. 97.

The ALJ stated that she “considers this matter resolved and the remaining dispute regarding DERMS, which relates to capitalization, will be addressed in the IT capital subsection of this PFD, because Staff’s recommended disallowance on this item ultimately relates to its analysis of IT capital expenditures.” PFD, p. 274.

No exceptions were filed on this issue. The Commission finds that the ALJ’s findings and recommendation are reasonable and prudent and should be adopted.

xvii. Work Management and Scheduling Upgrades (B5.4, Page 11, Line 24)

In Exhibit A-12, Schedule B5.4, page 11, DTE Electric identified capital expenditures of $1.25 million for the 22-month bridge period and $9.33 million for the projected test year.

The Staff contended that the company applied the “High-Level T-Shirt Sizing Cost Estimation method” to the work management and scheduling upgrades project, asserting that DTE Electric “only consider[ed] project size/complexity and duration in estimating the cost” and failed to provide specifics regarding the “project scope, goals, and desired outcomes.” 8 Tr 5187-5188. The Staff recommended that the company’s proposed capital expenditures for the bridge period and projected test year be disallowed.

DTE Electric objected to the Staff’s proposed disallowance, arguing that “it is not reasonable or prudent to propose disallowance of an entire group of projects solely because of a concern about an estimating method.” 4 Tr 464.

The ALJ stated that “[f]or the reasons discussed above, Staff’s adjustment is reasonable and should be adopted.” PFD, p. 275.

No exceptions were filed on this issue. The Commission finds that the ALJ's findings and recommendation are reasonable and prudent and should be adopted.

xviii. Asset Management Upgrades (B5.4, Page 11, Line 26)

In Exhibit A-12, Schedule B5.4, page 11, DTE Electric proposed asset management upgrades capital expenditures of $1.08 million for the 22-month bridge period and $1.95 million for the projected test year.

Like the work management and scheduling upgrades project, the Staff contended that the company applied the "High-Level T-Shirt Sizing Cost Estimate" method to this project and requested that the proposed capital expenditures be disallowed.

DTE Electric provided the same objection, stating that the Commission should not disallow the capital expenditures associated with this project because the Staff expressed concern regarding the estimating method. *See*, 4 Tr 464.

The ALJ found that "[f]or the reasons discussed above, Staff's adjustment is reasonable and should be adopted." PFD, p. 276.

No exceptions were filed on this issue. The Commission finds that the ALJ's findings and recommendation are reasonable and prudent and should be adopted.

xix. Load Forecasting and Analytics (B5.4, Page 11, Line 27)

In Exhibit A-12, Schedule B5.4, page 11, DTE Electric proposed capital expenditures of $3.3 million for the 22-month bridge period and $3.13 million for the projected test year.

Similar to the work management and scheduling upgrades project and the asset management upgrades project, the Staff asserted that the company applied the "High-Level T-Shirt Sizing Cost Estimate" method to this project and the proposed capital expenditures should be disallowed.

DTE Electric provided the same objection, stating that the Commission should not disallow the capital expenditures associated with this project because the Staff expressed concern regarding the estimating method. *See*, 4 Tr 464.

The ALJ found that "[f]or the reasons discussed above, Staff's adjustment is reasonable and should be adopted." PFD, pp. 275-276.

No exceptions were filed on this issue. The Commission finds that the ALJ's findings and recommendation are reasonable and prudent and should be adopted.

xx. Interconnection Process Enablement (B5.4, Page 11, Line 28)

In Exhibit A-12, Schedule B5.4, page 11, DTE Electric proposed interconnection process enablement capital expenditures of $3.14 million for the 22-month bridge year and $3.64 million for the projected test year.

The Staff noted that, on page 1 of the company's discovery response set forth in Exhibit S-7.37, the company stated that the interconnection process enablement project "will improve the customer experience during the interconnection process, including process efficiency in evaluating interconnection applications as requests scale up. The amount of time it takes to process interconnections is impacted by many factors and the reduction in processing time from this process improvement has not been calculated." Then, the Staff noted that, on page 4 of DTE Electric's discovery response in Exhibit S-7.37, the company stated that it:

> currently responds to interconnection request[s] within the timelines set forth in regulations. Depending on the project, interconnection requests range from a few days to the maximum allowed. In 2021, the Company only had six large projects requiring interconnection studies. The average study duration for these was 39 days, with a minimum of 29 days and a maximum of 59 days. Each study is dependent on the project scope, scale, and specific requirements.

8 Tr 5217 (footnotes omitted).

Next, the Staff noted that the ADMS: NMS project also impacts interconnection process and duration, but that the ADMS: NMS project has a lower capital cost than the interconnection process enablement project. The Staff stated that it:

> supports the Company's development of customer tools that support more rapid interconnection processes. Assisting customers to rapidly interconnect while maintaining the safety, reliability, and resiliency of the grid will be increasingly important in a future with more DERs. However, it is unclear why the creation of a smoother customer experience with the interconnection process will cost more than the ADMS: NMS upgrades that provides data to expedite the actual interconnection process. Given that the projected costs in the Interconnection Process Enablement project are high-level costs, there is likely a significant uncertainty and actual costs may not materialize.

8 Tr 5219 (footnote omitted). As a result, the Staff recommended that the Commission approve a $2.34 million disallowance for the 22-month bridge period and a $2.73 million disallowance for the projected test year. In addition, in Exhibit S-7.42, page 3, the Staff included an adjustment for "other costs."

In its initial brief, the Staff contended that the company did not rebut the Staff's position on this issue. *See*, Staff's initial brief, p. 79. However, DTE Electric did object to the Staff's proposed disallowance for "other costs."

The ALJ found that the Staff's proposed disallowances should be approved. *See*, PFD, p. 277.

No exceptions were filed on this issue. The Commission finds that the ALJ's findings and recommendation are reasonable and prudent and should be adopted.

xxi. Hosting Capacity Enablement (B5.4, Page 11, Line 29)

In Exhibit A-12, Schedule B5.4, page 11, DTE Electric proposed hosting capacity enablement capital expenditures of $208,000 for the 22-month bridge period and $250,000 for the projected test year.

In the PFD, the ALJ stated that "[the Staff] identified this project as an example of the t-shirt estimation method Staff finds insufficiently reliable to include in rate base. As noted above, [DTE Electric] objected to Staff's rejection of its t-shirt estimation method. For the reasons discussed above, Staff's adjustment is reasonable and should be adopted." PFD, p. 277 (footnote omitted).

No exceptions were filed on this issue. The Commission finds that the ALJ's findings and recommendation are reasonable and prudent and should be adopted.

xxii. Advanced Metering Infrastructure: Meter Communications Upgrade (B5.4, Page 11, Line 31)

DTE Electric contended that "[t]he cellular industry is currently migrating from 3G to 4G technology and is phasing out 3G cellular in Michigan by late 2020. This cellular industry transition forces DTE Electric to upgrade the components of their systems that are dependent on cellular technology, such as the AMI CR [cell relay]." 7 Tr 1905. DTE Electric noted that, in the May 8 order, the Commission disallowed $2 million for recovery in rate base for installation of additional cell relays in areas where signal is interrupted due to seasonal vegetation. In this case, DTE Electric stated that:

> The Company is no longer requesting recovery of the 300 relays previously disallowed by the Commission. In the [Case No.] U-20561 May 8, 2020 order, the Commission approved $30.1 million. The Company is seeking recovery of $0.6 million for the difference between the actual spend of $30.7 million and the authorized amount of $30.1 million. Regardless of the operating read rate at the time, vegetation begins to impact communication with customer meters, the impact of vegetation growth on radio networks is well established.

7 Tr 1907. In addition, the company requested recovery of the $3.9 million of power quality metering upgrade costs over and above the $9.2 million that was approved in the May 8 order "based on the risk associated with undetected systemic power quality issues, and event based

disturbances that can impact very costly customer equipment and plant operations run-time, as well as Company owned equipment." 7 Tr 1911.

The Staff recommended disallowance of $600,000 to remediate meters that are impacted by vegetation problems. The Staff explained that:

> While Staff is sympathetic to the customers who live in areas where vegetation growth affects meter performance from around May 15-October 15, the Company is unable to provide evidence that these customers are dissatisfied with their service. Staff requested the number of complaints received annually from these perennially-affected customers and the number of power outages experienced by these customers for the past 5 years, with information regarding the outages. The Company responded that they do not have data that correlates to customer complaints due to decreased meter read rates from vegetation growth. Furthermore, the Company states their single day performance of AMI reporting reliability in 2021 was 99.51%. The annual performance rate was 99.69% during months not impacted by vegetation and 99.26% during the months impacted by vegetation. The lowest annual performance rate, 99.26%, was during months impacted by vegetation and is still significantly above the current 85% acceptable meter reading service quality level of performance. The 99.26% performance rate is even significantly above the revised meter reading service quality standard performance rate of 95%, approved by the Commission for submission to the Legislative Service Bureau and the Michigan Office of Administrative Hearings and Rules for approval. Subsequently, Staff believes the $0.6M was unnecessarily spent.

8 Tr 5366-5367 (footnotes omitted); *see also*, Exhibits S-12.13 and S-12.14.

Responding to DTE Electric's request for the $3.9 million for the installation of power quality meters in 2020 for the company's largest commercial and industrial (C&I) customers, the Staff noted that, in the May 8 order, the Commission disallowed the expenditures for these meters because it determined that DTE Electric failed to sufficiently define the current status of systematic power quality. The Staff stated that, again, in this case:

> the Company has not adequately justified the installation of advanced power quality meters. While the Company lists possible benefits, it has not shown that those benefits have been realized by itself or to its customers. Company witness Smith's testimony states that the Company cannot quantify the benefits until it can detect and measure actual electrical disturbances and responses to them when failures occur. Until such benefits can be quantified or shown by actual proven evidence,

> Staff believes the historic and projected capital expenditures relating to the advanced power quality meters should be disallowed.

8 Tr 5367-5368 (footnotes omitted).

The Staff noted that, in Exhibit A-12, Schedule B5.4, page 11, DTE Electric proposed AMI: meter communications upgrades capital expenditures of $1.72 million for the 22-month bridge period and $500,000 for the projected test year. The Staff recommended a disallowance of all proposed capital expenditures because the Staff could not determine to what specific projects the total $2.27 million applies.

DTE Electric disagreed with the Staff's claim that the company provided no evidence that customers were affected by loss of meter communications due to vegetation issues. The company explained that:

> While it is true that the Company does not directly correlate customer complaints with poor AMI meter performance due to vegetation, the Company relies on other correlations to establish this relationship. Certain areas lose AMI connectivity during the seasonal increase in vegetation density. Specifically, when tree leaves grow in May, this vegetation density is enough to interrupt approximately 13,000 AMI meters' connection to the network. Because the Company is no longer receiving electric usage data from these customers, billing must be estimated based on prior usage and seasonal trending. When these customers complain of these estimated bills, this reinforces that AMI meter performance is poor in that area. Field validation of these conditions confirms the need for additional investment in those portions of the AMI network in order to extend reliable connectivity to the affected customers.

7 Tr 1915-1916. In addition, DTE Electric asserted that, contrary to the Staff's claim that the company's metering reading rate is 99.26-99.69%, the meter read rate for those particular 13,000 customers "is effectively zero during the six months of higher-density vegetation." 7 Tr 1916. Furthermore, the company contended that the $600,000 requested for recovery over the estimated project cost of $30.1 million approved in the May 8 order is due to higher-than-planned labor costs.

Regarding the power quality meters for C&I customers, the company disagreed with the Staff that the investment is only beneficial for forensic use. DTE Electric stated that:

> The Company believes that the investment in PQ [power quality] meters for our highest-load customers is designed to reduce impact and/or damage to grid assets or customer equipment if disturbances occur. These customers have loads of 1 megawatt or greater and would have the largest potential for equipment damage in these scenarios. It is crucial that disturbances are detected immediately, and relevant data is available to inform operational personnel and/or customers if immediate, mitigating action is needed. As such, the PQ meters must be in service prior to electrical disturbances occurring. Further, to leverage labor and time efficiencies in the meter replacement work that was already happening with the 3G-to-4G upgrade, it was the appropriate time to include PQ capabilities for these highest-load customers.

7 Tr 1917; *see also*, DTE Electric's initial brief, p. 110. In the event the Commission disallows full recovery of these expenditures, DTE Electric requested that the Commission approve $698,000 for the cost of replacing existing 3G meters with non-power quality 4G meters, which would cover the cost of purchasing and installing the meters.

In its initial brief, the Staff revised its recommended disallowance to $3.9 million for 2020, $1.03 million for the 22-month bridge period, and $500,000 for the projected test year. Additionally, the Staff noted that it no longer disputes DTE Electric's proposed $600,000 to remediate meters affected by vegetation issues. Finally, the Staff stated that, "[w]hile Staff recommends a disallowance of costs related to advanced power quality meters, Staff agrees with the Company on the allowance of $0.698M in costs to cover the replacement of existing 3G meters with non PQ 4G meters." Staff's initial brief, p. 90.

In the PFD, the ALJ found that, "[f]or the reasons explained in Staff's brief, this [ALJ] finds that Staff's revised recommendation is reasonable and should be adopted." PFD, p. 281.

DTE Electric excepts, asserting that the ALJ's recommended disallowance for PQ meters should be rejected. The company contends that:

> [it] is in an evidentiary dilemma – it cannot provide "actual evidence" of customer benefits from the investment until it makes the investment that will provide the "actual evidence" of those benefits by capturing occurrences and responses to power disturbances. There is, however, reasonable evidence of numerous benefits based on industry use of PQ meters by other utilities, as reflected by generally available publications (Smith, 7 [Tr] 1909-1911).

DTE Electric's exceptions, pp. 116-117. Furthermore, DTE Electric alleges that the Staff misunderstood the company's request for recovery of historical expenditures and incorrectly recommended a disallowance for the bridge period and projected test year. The company claims that the proposed $3.9 million is for investments made over and above the $9.2 million approved in Case No. U-20561.

In reply to DTE Electric's claim that it cannot quantify the benefits of the power quality meter project until the company invests and executes the project, the Staff affirms its request that the Commission disallow the expenditures until DTE Electric can quantify and prove the benefits of the power quality meters with actual evidence. The Staff explains that it "is suggesting the Company conduct similar studies or pilots for advanced power quality meters, to prove their benefit, before receiving recovery. Passing an expense of $3.9 million onto ratepayers without knowledge of whether it will provide them an advantage from this investment is unfair and unjust." Staff's replies to exceptions, pp. 16-17.

Responding to DTE Electric's contention that the Staff misunderstood the company's request for recovery, the Staff "argues that if the advanced power quality meters have already been deployed, collecting actual evidence of quantifiable benefits should be simple as the advantages should be being realized." *Id.*, p. 17. Accordingly, the Staff recommends that the Commission adopt the ALJ's recommendation.

In reply, the Attorney General asserts that the ALJ's findings are fully supported by the record and that the Commission should adopt the ALJ's recommendation. *See*, Attorney General's replies to exceptions, p. 41.

The Commission notes that, in its initial brief, the Staff acknowledges that, "although the overall company meter read rate is satisfactory, the meter read rate for these perennially affected customers is near zero for the 6 months of high-density foliage. (Smith 7 Tr 1915-1916.) Upon the receipt of the additional information, Staff retracts [the] recommendation" to disallow the expenditures for remediation of meters affected by seasonal vegetation. Staff's initial brief, p. 88. Therefore, the Commission finds that this issue is undisputed.

Regarding the Staff's recommended \$3.9 million disallowance for the installation of power quality meters in the historical year, the Commission respectfully declines to adopt the ALJ's recommendation to disallow these costs on the basis of the Staff's arguments, and instead approves the \$3.9 million for investments made over and above the \$9.2 million approved in Case No. U-20561. The Commission acknowledges that this decision differs from its decision in the May 8 order. In that case, the Commission stated that it was "not adverse to investments of this type, but must rely on evidence that the investment is reasonable and prudent and will be made." May 8 order, p. 93. In the present case, the final concern—whether the investment will be made—has been addressed; DTE Electric has expended these funds. As such, the Commission is left only with the question of whether this investment was reasonable and prudent. While continuing to note the importance of a detailed record with quantifiable benefits to support investments—particularly those included in a future test year—the Commission is persuaded based on the record before it that the additional \$3.9 million invested in power quality meters should be approved. In supporting the project, DTE Electric did provide a series of *qualitative* benefits which, while not the same as *quantitative* metrics, do provide support for the expenditure. In addition, the Commission finds that the evidence of benefits cited by DTE Electric based on industry use of power quality meters by other utilities further supports the reasonableness of this investment. DTE Electric's exceptions, pp. 116-117 (citing 7 Tr 1909-1911). The Commission also notes the "evidentiary dilemma" referenced by the company that made it challenging to provide evidence of customer benefits until it had made the investment. 7 Tr 1910. In conclusion, the Commission finds that DTE Electric's $3.9 million in capital expenditures related to power quality meters above what is already included in rates is reasonable and prudent and should be adopted, and the Staff's proposed $1.03 million for the 22-month bridge period and $500,000 disallowance for the test year should be approved.

xxiii. Automation Configuration and Test Record Database (B5.4, Page 11, Line 34)

In Exhibit A-12, Schedule B5.4, page 11, DTE Electric proposed automation configuration and test record database capital expenditures of $2.04 million for the 22-month bridge period and $1.83 million for the projected test year.

The Staff contended that this is another project to which DTE Electric applied the "High-Level T-Shirt Sizing Cost Estimation" method. *See*, 8 Tr 5188-5191. The Staff's first concern was that the project is in a preliminary phase and the costs are not well developed. *See*, 8 Tr 5191. Second, the Staff asserted that DTE Electric "may not be properly accounting for IT O&M and capital costs per its own guidance regarding software capitalization procedures." 8 Tr 1591. Therefore, the Staff recommended a full disallowance of the proposed capital expenditures, resulting in a $2.04 million disallowance for the 22-month bridge period and a $1.83 million disallowance for the test year.

In response, DTE Electric disputed the Staff's claim that the project is in the preliminary planning stage. The company asserted that "all data conversion or data cleanup costs will be expensed[,]" not capitalized. 4 Tr 452.

The ALJ found that "the company has failed to establish that the project is not in a preliminary stage, or that it identified O&M costs associated with this project that were already capitalized. Staff's adjustment is reasonable and should be adopted." PFD, p. 281.

In exceptions, DTE Electric disagrees with the ALJ's finding. The company asserts that the Staff did not argue that DTE Electric should not invest in or complete the project; rather, the Staff disputes the portion of expenditures that should be expensed. *See*, DTE Electric's exceptions, pp. 88-89. DTE Electric contends that it provided sufficient testimony and data to demonstrate that the project is not in the initial stages and should not be expensed and, therefore, requests that the Commission reject the ALJ's recommendation.

The Attorney General replies to DTE Electric, contending that the ALJ's findings and recommendation are fully supported by the record. She asserts that in DTE Electric's exceptions, the company reiterates the arguments set forth in testimony, which have been addressed by the ALJ. *See*, Attorney General's replies to exceptions, p. 34.

The Commission notes the Staff's contentions that "[g]iven that the Company has yet to evaluate software options, the projected costs for the project are quite preliminary and may differ substantially from the final project cost." 8 Tr 5191. The Staff also expresses concern that because the project is a preliminary stage, the company is improperly accounting for this cost in violation of its own software capitalization procedures. The company responds that "[t]hese projects were not presented in this case as being in the preliminary stage of activities and all data conversion or data cleanup costs will be expensed. Therefore, Staff Witness Wang's concerns are unwarranted." 4 Tr 452. The Commission finds that DTE Electric's simple response fails to sufficiently refute the Staff's concerns that the project is still in an initial phase and that it is premature to approve the expenditures. Therefore, the Commission finds that the Staff's proposed disallowance is reasonable and prudent and should be adopted.

The Commission also emphasizes its concern regarding the Staff's claim that the company may not be properly accounting for IT and O&M costs. As provided elsewhere in the order, the Commission notes its concern over utility capitalization policies and practices and intends to provide additional guidance and next steps on this issue in the future.

xxiv. Grid Edge Insights and New Technology (B5.4, Page 11, Line 35)

In Exhibit A-12, Schedule B5.4, page 11, DTE Electric proposed capital expenditures for grid edge insights and new technology of $1.99 million for the 22-month bridge period and $1.78 million for the projected test year.

Citing the company's discovery response in Exhibit S-7.12, page 3, the Staff stated that:

> The description of the Grid Edge Insights & New Technology project scope in discovery focuses on a more general investigation, evaluation, and procurement of new grid hardware for DTE Electric. It conflicts with the project scope provided in Company exhibits, where the focus is on the development and implementation of a platform with cyber secure control and communications schemes for DER resources and microgrids.

8 Tr 5185-5186. In addition, the Staff contended that DTE Electric is unable to provide the number of locations where the platform will interact with DERs. The Staff noted that "[i]n the short term, the Company expects to deploy the platform at various pilot projects, many of which have not yet been completed or received internal approval to proceed (Veridian)." 8 Tr 5186 (footnote omitted).

DTE Electric disagreed with the Staff that conflicting information regarding the project scope had been provided. The company averred that:

> In discovery response STDE-15.66c, shown in Staff Exhibit S-7.12 page 3 of 5, the Company states that "New Technology Pilots project is used to investigate, evaluate and procure initial instances of new grid hardware for DTE Electric." The referenced scope was for New Technology Pilots, which was part of the Technology Programs & NWA project line item in past cases. In STDE-15.66c, the Company does note that should there be any such new technology pilots, those costs will be shown in the new Grid Edge Insights & New Technology line item, but the Company in no way implied this changed the scope of work currently proposed in Grid Edge Insights & New Technology.

4 Tr 467.

On page 283 of the PFD, the ALJ found that "DTE [Electric] has not changed the scope of the project, and in the absence of other objections, its cost projection should be adopted."

No exceptions were filed on this issue. The Commission finds that the ALJ's findings and recommendation are reasonable and prudent and should be adopted.

xxv. Other Modernize Grid Management (B5.4, Page 11, Line 37)

In Exhibit A-12, Schedule B5.4, page 11, DTE Electric proposed other modernize grid management capital expenditures of $3.89 million for the 22-month bridge period and $1.4 million for the projected test year.

The ALJ stated that the Staff "identified this project as an example of the t-shirt estimation method Staff finds insufficiently reliable to include in rate base. As noted above, [the company] objected to Staff's rejection of its t-shirt estimation method. For the reasons discussed above, this [ALJ] finds DTE [Electric]'s t-shirt-sizing estimation method is unreliable and Staff's recommendation is reasonable." PFD, p. 283 (footnotes omitted).

No exceptions were filed on this issue. The Commission finds that the ALJ's findings and recommendation are reasonable and prudent and should be adopted.

xxvi. Operational Technology and Error Free Communication (B5.4, Page 11, Line 39)

In Exhibit A-12, Schedule B5.4, page 11, DTE Electric proposed operational technology and error free communications capital expenditures of $12.61 million for the 22-month bridge period and $333,000 for the projected test year.

The Staff expressed concern that "the capital and O&M costs for this project are not properly classified. The project appears to be focused on manipulation of the Company's current data from various areas into one single source of data to generate a new type of data report." 8 Tr 5194. In addition, the Staff contended that the costs of the project seem exorbitant compared to project description and scope. *See*, 8 Tr 5195. As a result, the Staff recommended that the Commission approve a full disallowance of the bridge period and projected test year capital expenditures.

DTE Electric objected to the Staff's characterization of the project:

> The EFC [error free communication] project is a significant project that fundamentally changes the underlying process by which we communicate with our customers, and in scope goes well beyond simply resulting in new reports and facilitating data retrieval. Over the course of the frequent outages in the summer of 2021 and in previous outages, customers have frequently identified that they want accurate and consistent communication about the status of their outages. The Company has listened to its customers, and the EFC project represents a significant improvement, and a strategic shift in how we are communicating with our customers about their outages. Our current OMS (Outage Management System) has limited ability to leverage AMI data in real time. With EFC, the Company is leveraging our AMI information as it becomes immediately available to determine restoration status of its customers. The Company is also combining our AMI data with the equipment hierarchy of the distribution network to understand and locate trouble behind trouble customers - meaning customers that would have previously been believed to have been restored, but in fact were not. In the past, those customers would have to call or report their outage again using Company channels in order for the Company to know they still did not have power. Additionally, the Company is pushing this new information about outages into its customer systems so customers know that 1) the Company is aware that they don't have power; 2) the Company believes they may have lost power; 3) the Company can confirm their power has been restored.

4 Tr 453. DTE Electric asserted that the project is a "major undertaking . . . not simply 'data manipulation'" and, as a result, should be capitalized rather than expensed. 4 Tr 453-454.

The Staff disagreed, reiterating that the project does not meet the criteria for capitalization. The Staff stated that DTE Electric "being able to tell customers whether the Company definitively knows whether customers have power or not does not constitute significant additional functionality. This is especially true when the Company is developing new reports and dashboards that process currently available AMI data." Staff's initial brief, p. 62.

The ALJ found the Staff's position persuasive and recommended that the Commission adopt the Staff's proposed disallowances. She stated that:

> Even putting aside Staff's legitimate concerns with capitalization, as Staff argues, DTE [Electric] has not explained the $12.6 million cost. [Exhibit A-23,] Schedule M6, for which some of the deficiencies have been noted above, does not even have minimal cost detail for the $12.6 million bridge period expenditure for this project, with the labor/material/other cost breakdown in M6 limited to the $333,000 projected test year expense. DTE [Electric] has also made no effort to integrate this "error free" project with its IT "error free" projects, including the $8.1 million expense projection presented in Schedules N1.351 and N1.352, which are duplicative business case documents each covering the April 2021 to October 2021 time period and identified as the support for Schedule B5.7.3, page 1, line 44. Likewise, DTE [Electric] has not explained how this project relates to all its other OMS expenses, including its difficulty with the OMS component of ADMS as discussed above.

PFD, pp. 285-286.

DTE Electric excepts, asserting that it provided adequate support for the proposed capital expenditures and sufficiently responded to the Staff's concerns. The company objects to the ALJ's findings and conclusions stating that:

> The ALJ should evaluate the issues presented on the record. Here, nobody challenged the cost. Instead, the narrow issue was just whether the cost should be capitalized or expensed (affecting, at most, the return "on" the investment, and not the return "of" the investment). The Company proved that the cost should be capitalized. Therefore, the [ALJ]'s recommendation should be rejected.

DTE Electric's exceptions, p. 91.

The Attorney General replies to DTE Electric, contending that the ALJ's findings and recommendation are fully supported by the record. She asserts that in DTE Electric's exceptions, the company reiterates the arguments set forth in testimony, which have been addressed by the ALJ. *See*, Attorney General's replies to exceptions, pp. 34-35.

The Commission notes that in testimony, the Staff "recommends full disallowance of the projected costs for the Operational Technology and Error Free Communication project, resulting in a capital disallowance of $12,608,000 in the projected bridge period and $333,000 in the projected test year." 8 Tr 5195. The Staff first asserts that the project does not meet the criteria to qualify as a capital cost. Second, the Staff states that it "is perplexed at the overall projected project cost of $12.9 million from 2021-2023. The project is limited to manipulating existing data in the Company's system and generating new reports from the pooled data. It is unclear why this should cost as much as the Company projects." 8 Tr 5195 (footnote omitted).

Although the company responds to the Staff's first claim that the costs of the project should be expensed, rather than capitalized, DTE Electric does not reply to the Staff's second claim that the costs of the project seem exorbitant. *See*, 4 Tr 453-454; DTE Electric's exceptions, pp. 90-91. As noted by the ALJ, Exhibit A-23, Schedule M6, page 154 and Exhibit A-12, Schedule B5.7.3, page 1 contain projected costs but provide almost no breakdown of cost detail. The company bears the responsibility of supporting its expenditures with sufficient detail, which was not provided for this category of expenditures. Therefore, the Commission finds that the Staff's proposed disallowances should be approved.

E. Community Lighting (Exhibit A-12, Schedule B5.5)

1. The Commission Staff

DTE Electric reported a 2020 capital expenditure of $15.2 million, and projected $15.7 million for 2021, $13.9 million for the 10-month bridge period, and $16.7 million in capital expenditures for the test year. *See*, 7 Tr 1720-1724. Based on a 2021 overprojection for this category (projections exceeded actuals by 5.87%), the Staff recommended a total reduction of $1.85 million for the full bridge period and $1.15 million for the test year. 8 Tr 5171-5174; Exhibits S-7.1, S-7.2.

The ALJ agreed with the Staff, noting that DTE Electric failed to adequately explain the overprojection, and failed to separately forecast expenses for the cable replacement program and the outage restoration effort. The ALJ recommended that the Commission adopt the Staff's proposed reductions to rate base. PFD, p. 289.

In exceptions, the Staff states that the ALJ failed to adopt the Staff's corresponding reductions to O&M. Staff's exceptions, pp. 8-9. This issue is addressed in the discussion of Adjusted Net Operating Income, Community Lighting, below.

In exceptions, DTE Electric argues that the disallowance is subjective because the Staff calculated it based only on 2021 actuals versus projected expenditures. DTE Electric argues that the Staff should have considered 2020 actuals as well (which resulted in an overspend) and should have considered the economic impact of the pandemic and the challenging storm season in 2021. DTE Electric's exceptions, p. 118. DTE Electric notes that the cable replacement program is new and thus would not be reflected in historical spending and asserts that the ALJ's emphasis on the company's lack of detail does not comport with the evidentiary standard of preponderance of the evidence. *Id.*, p. 119.

In reply, the Attorney General argues that DTE Electric misunderstood the Staff's analysis and simply repeats its testimony in exceptions. Attorney General's replies to exceptions, pp. 41-42.

The Commission adopts the findings and recommendations of the ALJ. The Commission finds that the Staff's proposed adjustments, though small, are reasonable in light of the previous overprojection and the ALJ's conclusions regarding the lack of support in the record for specific elements of the streetlighting program.

2. Michigan Municipal Association for Utility Issues and the City of Ann Arbor

For this streetlighting expenditure category, MI-MAUI/Ann Arbor also proposed reductions, arguing that the company's plant balances were not valid. MI-MAUI/Ann Arbor also argued for a disallowance based on the argument that DTE Electric installs the wrong light emitting diode (LED) wattage, which is above the wattage used by Consumers and is unnecessarily bright. 8 Tr 3467-3471; Exhibits MAUI-17, MAUI-18. MI-MAUI/Ann Arbor took issue with the company's re-lamping policy and its 2020 historical plant balances and argued that DTE Electric should stop re-lamping high intensity discharge lamps because the company has not shown that this prevents outages. 8 Tr 3458-3470; Exhibit MAUI-44.

The ALJ found that the intervenors raised a legitimate concern regarding the wattage issue and that DTE Electric should be warned that it will need to justify the wattage and re-lamping decisions in future rate cases, but concluded that the record did not support making any changes to the company's proposed plant balances. PFD, pp. 293-294.

In exceptions, MI-MAUI/Ann Arbor argue that rather than simply requiring further information, the Commission should adopt the intervenors' proposed $35,689 disallowance based on DTE Electric's inappropriate wattage choice. MI-MAUI/Ann Arbor's exceptions, pp. 14-15.

They contend that the company should be required to show that there are cost savings associated with using the brighter LEDs. *Id*.

In reply, DTE Electric argues that it is appropriate to use the GCL J-Series model LEDs for conversion because they provide the flexibility to accommodate low to high lumen output and thus allow for "adequate streetlighting for the circumstances," noting that the company takes into consideration the spacing and height of poles. DTE Electric's replies to exceptions, p. 21. DTE Electric also argues that group re-lamping should continue because it reduces outages, and the luminaires are Commission-approved and consistent with the company's tariff.

As discussed above, the Commission approves the Staff's proposed disallowances but is not persuaded to adopt the proposed disallowance associated with the use of LEDs or change the plant balances which DTE Electric supported on the record (and which are discussed in greater detail in Cost of Service, Streetlight Depreciation Expense, below). The Commission thus adopts the findings of the ALJ on these streetlighting issues but reiterates that DTE Electric will need to provide an updated analysis of its re-lamping policy and wattage selection in future rate cases.

F. Demand Response (Exhibit A-12, Schedule B5.6)

For this category, the ALJ stated that for "the reasons discussed in section IX below [Other Revenue Related Items], this PFD concludes that the project costs of the residential window air conditioning pilot, the residential generation pilot, and the commercial and industrial customer storage pilot should not be approved." PFD, p. 294. These pilot projects were addressed by the ALJ at pages 541-547 of the PFD. Thus, DTE Electric's exceptions to the ALJ's disapproval of the programs are addressed in the discussion of Other Revenue Related Items, Pilot Programs, below. Because the Commission agrees with the ALJ in its determination, for capital expenditure purposes the Commission adopts the proposed disallowances of $0.21 million for the bridge period and $0.49 million for the test year for the air conditioning pilot, $0.18 million for the bridge period and $0.24 million for the test year for the residential generation pilot, and $1.35 million for the bridge period and $1.5 million for the test year for the storage pilot. Exhibit A-12, Schedule B5.6, line 3; Exhibit S-14.2, lines 33-37; 8 Tr 5383.

G. Information Technology (Exhibit A-12, Schedule B5.7)

DTE Electric reported IT capital spending of $139.6 million in the 2020 historical year and projected $279.3 million in spending for the 22-month bridge period, and $159.6 million for the projected test year. *See*, 7 Tr 1925; Exhibit A-12, Schedule B5.7.

The ALJ explained that her discussion of IT expenditures relies on the portfolio categories created by DTE Electric (using detail provided in Exhibit A-12, Schedules B5.7.1 through B5.7.9) when addressing both the general and specific reductions proposed by the Staff and the Attorney General, below. PFD, p. 295. The ALJ began with a general discussion of the quality of the evidence.

1. Compliance With Filing Requirements

At pages 295-309 of the PFD, the ALJ reviewed the history of the Commission's instructions to DTE Electric regarding documentation of IT expenditures in rate cases. In the May 8 order, pp. 122-124, 151-153, the Commission indicated that DTE Electric had been failing (over the course of multiple rate cases) to provide appropriate detail for individual IT projects and the Commission provided the company with additional guidance for future evidentiary presentations in this area. In response, DTE Electric explained the documentation it provided in the instant case as well as its new prioritization process. 7 Tr 1927. As a general observation, the ALJ found that:

> the documents DTE [Electric] provided for the record in this case do not appear to comply with the Commission's instructions, which frustrates review of both the reasonableness and prudence of the company's proposed spending and the likelihood money will be spent as projected, and evinces the vicious cycle [of lack

> of documentation] the Commission described. For example, neither the N1 schedules nor Schedule N3 contains a quantification of benefits for the projects listed, a timeline showing the project steps or associated spending plans, the project approval date or any necessary approvals by management, or previous O&M spending.

PFD, pp. 299-300 (footnotes omitted). The ALJ goes on to give other examples including Exhibit A-24, Schedules N1, N2.1, and N2.2, which provide certain information that is undated, lacks content, or includes projects that were excluded from rate base in the May 8 order. The ALJ addressed Exhibit A-42, Schedule GG3, which is an additional variance report provided by the company on rebuttal to explain the difference between projected and actual spending, and concluded that "this schedule is actually a significant indictment of the company's cost estimation process, which lacks credibility." PFD, p. 301.

The ALJ explained DTE Electric's annual planning cycle process for prioritizing IT projects, which is now used in lieu of a BCA, and is described at 7 Tr 1927-1928. As a result of the new process, the ALJ found, DTE Electric failed to provide any quantification of benefits associated with IT projects or a BCA. The ALJ found that, in prior rate cases, the Commission had determined that a BCA is a component of a reasonableness and prudence review. PFD, p. 302. The ALJ found that "there is no evidence on this record establishing that DTE [Electric]'s prioritization process is an adequate substitute for traditional reasonableness and prudence review," and the company failed to provide a quantification of benefits in any of its business case documents despite the fact that "benefit/cost" ratio is an element of the prioritization scoring. PFD, pp. 303-304; *see also*, Exhibit AG-1.71, p. 6. The ALJ concluded that, since this information is at least a small part of the prioritization analysis, the only reason to exclude it from the rate case filing is that the company believes it should not be expected to do so. PFD, p. 304.

The ALJ also expressed concern with the lack of clear information on project scope, citing several examples that speak only in terms of generalities and lack the degree of specificity necessary for the Commission's audit and review, and she noted certain inconsistencies between the Schedule B5 and N1 documents. PFD, pp. 305-308. The ALJ stated that "review of these and other documents leads this PFD to conclude that these and similar projects are essentially placeholders, which explains the significant variation in actual expenditures to forecast expenditures for these categories, with the company's focus on 'spending' approved dollars, not meeting any particular or definitive program scope." *Id*., p. 308. The ALJ then moved on to address the general and specific adjustments proposed by the Staff and the Attorney General, which are discussed below. Her general observations are reflected in her decisions and recommendations.

In exceptions, DTE Electric notes that any disallowance for a capital project that is a shared asset must also be removed from net operating income, citing 7 Tr 2394, 2786-2787 and Exhibit A-43, Schedule HH1. DTE Electric notes that the Staff adopted this argument at page 135 of the Staff's initial brief, but states that the PFD does not reflect these necessary adjustments. DTE Electric's exceptions, p. 124.

Moving on to the issue of documentation, DTE Electric objects to the ALJ's description of placeholders, and argues that it has made a significant effort to address the comments of the Commission from the May 8 order, both through its evidence and through the Five-Year IT Plan. DTE Electric notes that the Commission has asked for an increasing level of detail over the last three rate cases and the company has responded by creating several new exhibits. DTE Electric also contends that, for many IT projects, financial benefit is not the key factor in deciding whether to implement the project, and thus the prioritization process considers several other factors. DTE

Electric's exceptions, pp. 125-126 (citing 7 Tr 2166). The company argues that it includes a BCA where it is appropriate and includes an executive summary for each business case associated with an IT project over $250,000.

In reply, the Attorney General states her agreement with the ALJ's discussion of the shortcomings of DTE Electric's evidentiary presentation. Attorney General's replies to exceptions, p. 44. The Attorney General objects to the company's failure to support its forecasts for the projected test year and general lack of evidence and agrees with the ALJ's decisions on individual line items, which are discussed below.

2. Level 1 and Level 2 Cost Estimates

As part of its prioritization process, DTE Electric categorized its cost estimates as Level 1, 2, or 3. These categories were created by the company based on the timing of the project and the level of detail that the company determines is required or available. 7 Tr 1927-1928, 2129. A Level 1 cost estimate is based on "historical spend analysis, subject matter expert input, and vendor partnership advisement." 7 Tr 1927-1928. As a project moves through the prioritization process, it "evolves into a 'Level 2' cost estimate, which includes cost breakdown with internal labor hours, hardware and software cost, internal project management cost where required, and consultant and vendor quotes." 7 Tr 1928. When Level 2 business cases "transition into project execution" they evolve into Level 3, where "cost and schedule are managed." 7 Tr 1928.

a. Level 1 Cost Estimates

The Staff proposed a $50.7 million disallowance for this cost category for the test year. The Staff testified that 26 of the 100 business cases included for the test year contain Level 1 cost estimates and recommended that they all be excluded from rate base because the Staff, despite numerous attempts through discovery, was unable to understand the methodology used to arrive at the cost estimates. 8 Tr 5342-5344; Exhibit S-12.5, pp. 3-4. The Staff found the Level 1 cost estimate for this period to be "immature and solely a concept being screened for feasibility," leaving little to rely on for a reasonableness and prudency review. 8 Tr 5343. The Staff recommended that DTE Electric be directed to provide information such as confidence intervals and accuracy ranges. DTE Electric argued that the Staff's recommendations are arbitrary. The ALJ's decision appears below.

b. Level 2 Cost Estimates

The Staff proposed a 20% across the board reduction which equates to a $36.0 million disallowance in total, or $19.596 million for the 10-month bridge period and $16.353 million for the test year, for all 108 projects in this cost category. 8 Tr 5344-5345. The Staff explained that all of the remaining 2023 projects have Level 2 estimates as do all of the 2022 projects. Despite the increased level of detail, the Staff contended that it was unable to learn how the cost estimates were arrived at, and that, as with Level 1, discovery did not result in a better understanding. The Staff argued that the projects do not have a definite scope or schedule and, where there is no accompanying contract, there is the possibility that the project will change or disappear. The Staff concluded that it is "unreasonable to pass this uncertainty on to ratepayers," along with noting that the Staff could not determine whether projects included more than one vendor or whether requests for proposals (RFPs) are necessary. 8 Tr 5345-5346. Based on information and recommended practices from the Association for the Advancement of Cost Engineering (AACE), the Staff recommended a 20% reduction to the Level 2 cost estimates as representing the amount that the company could potentially overrecover. 8 Tr 5343-5346. DTE Electric countered that over-projections and under-projections offset each other. The ALJ's decision appears in the next section.

c. Findings and Conclusions

The ALJ found the cost estimates to be "unjustified and unreliable." PFD, p. 316. The ALJ noted that rather than seeking recovery for actual expenditures (as is always an option in future rate cases), DTE Electric chose to rely on projections without adhering to the detailed guidance regarding necessary evidence provided by the Commission in past rate cases, and without providing the information in discovery responses that might have allowed for an adequate review. The ALJ noted that DTE Electric provided actual approvals for no projects, and, when asked if all IT projects would be executed, responded repeatedly that they were "planned to be executed." *Id*., p. 317 (quoting Exhibit S-12.5, pp. 10-12). Analyzing the N1 schedules, the ALJ found that "the company's projections are not transparent, and there is nothing in those documents that shows how the cost projections are made . . . ." PFD, p. 318. The ALJ goes on to discuss several examples illustrating the lack of necessary information, including exhibits that provide no start or end month, boxes left blank, broad outlines of objectives, confusing information, lack of support, no information for follow-up years, inconsistencies in dates for the same item across schedules, no BCAs, and no explanation of the basis for the cost estimate. *Id*., pp. 318-324. The ALJ found that "references to the customer journey and customer experience are ubiquitous throughout the company's project descriptions and do not help to distinguish one project from another or allow verification when the project has been completed." *Id*., pp. 322-323.

Regarding Level 2 specifically, the ALJ found that DTE Electric failed to support the legitimacy of the cost estimates. *Id*., p. 323. The ALJ described Exhibit A-42, Schedule GG3 as having an "extraordinarily wide error range" for the cost estimates, and, contrary to the Commission's instructions, no change documents explaining the need for the error range were provided. PFD, p. 323. The ALJ stated that:

> [i]n view of the project-by-project errors shown in Schedule GG3, DTE [Electric]'s claim that its Level 2 estimation process is akin to the AACE Class 2 project with error ranges on the low side of -5% to -15% and on the high side, of 5% to 20%, is unsupported. Indeed, a review of the line items in Schedule GG3 shows 26 of the underprojections are -20% or greater, and 18 of the overprojections are +30% or greater; that is, 42 of the 68 line items (62%) show projection errors in the Class 6 estimate band or worse than the Class 6 estimate band.

PFD, pp. 323-324. And the ALJ concluded that:

> [b]ecause Staff's analysis provides a reasonable approach to what is otherwise a non-conforming and unsupported collection of cost estimates, with no established reliability as shown by Schedule GG3, this PFD finds that Staff's recommendations should be adopted for those projects, with exceptions for any other recommended adjustments that are discussed in more detail below, that obviate or duplicate Staff's Level 1 and Level 2 adjustments. The company's contention that whatever level of imprecision is included in its estimates, some amount of funding should be provided for its projects, is rejected.

PFD, p. 324.

In exceptions, the DAAOs except to the ALJ's lack of any discussion of the low-income solar program specifically. The DAAOs argue that "DTE [Electric]'s total projection for its IT low-income solar costs exceeds the Company's commitment of funds to the program," and the costs lack justification. DAAOs' exceptions, p. 6.

In exceptions, DTE Electric argues that investments are categorized as Level 1 only because of their timing in the annual planning cycle and not because of their possible inaccuracy with regard to cost. DTE Electric's exceptions, p. 127 (citing 7 Tr 1927-1928, 2129). DTE Electric contends that historical spending is a valid way of estimating the future spend for projects that are repeated or are similar to other projects. The company asserts that, for both repeatable and similar projects, providing a Level 3 cost estimate "would result in little to no variance, so the costs should be approved (Sharma, 7 [Tr] 2130)." DTE Electric's exceptions, p. 127. DTE Electric contends that it has met the preponderance of the evidence standard and "there is no sound basis to assign $0 to the projects for a perceived lack of precision." DTE Electric's exceptions, p. 128.

Turning to Level 2, DTE Electric states that 98 out of the 108 projects were in progress by the time that rebuttal evidence was filed and argues that it has consistently spent an amount close to its Level 2 estimate or has exceeded it. DTE Electric asserts that "even assuming inaccuracy in individual project estimates (as Staff suggested), the over-projections and under-projections offset each other, trending back towards the overall projection (a collective variance close to 0)." DTE Electric's exceptions, p. 130. The company also argues that 20% is arbitrary as it was chosen by the Staff by equating Level 2 to AACE Class 3 cost estimates which have a lower boundary of -20%. DTE Electric explains that the AACE represents "just one method of cost estimation," and that Class 3 also has an upper boundary of +30%. *Id*.

In reply, the Staff argues that it attempted, numerous times, to understand how the costs were projected and assumes that, if that information cannot be provided, then it probably does not exist. The Staff states that it "cannot determine the precision of a cost." Staff's replies to exceptions, p. 6. The Staff explains that it looks at projects on an individual basis to see whether they meet the requirements of reasonableness and prudence, rather than looking at an overall budget. The Staff also notes that the 68 projects addressed by the May 8 order had individual cost estimate variances ranging from 100% over-projected to 316% under-projected, with the average variance for underspending being 40%. Staff's replies to exceptions, pp. 7-8.

In her reply, the Attorney General agrees with the ALJ, and objects to DTE Electric's use of a so-called long-term strategy as an excuse for poorly supported projections. Attorney General's replies to exceptions, p. 46.

In its reply, DTE Electric argues that the DAAOs' exceptions contradict their own witness and fail to present a viable argument against the proposed costs. DTE Electric's replies to exceptions, p. 23.

The Commission agrees with the ALJ, the Staff, and the Attorney General and adopts the findings and recommendations of the ALJ. The cost variances pointed out by the Staff and the ALJ are telling. Regardless of whether costs are for projects that are similar to earlier projects, it is still necessary to have a clear understanding of the timing of the project and a level of detail regarding the costs that demonstrates that the costs are reasonable and prudent—without that, the costs cannot be properly evaluated by the Commission for inclusion in rate base and the projections are incomplete. The Commission also finds it appropriate that the Staff recommends adjustments to individual projects rather than to a budget as a whole. That is the only way to determine whether a project presents benefits to ratepayers. The Commission's determination of reasonableness and prudency (and its obligation to protect ratepayers) involves more than the simple hope that the over- and under-projections balance one another out. MCL 460.6; MCL 460.6a.

3. Corporate Applications (Exhibit A-12, Schedule B5.7.1)

    a. Level 1 and 2 Cost Estimates (Schedule B5.7.1, Lines 1, 3-6, 8, 11-14, 16-17, 18, 22, 23)

As discussed above, the ALJ recommended adoption of the Staff's proposed reductions. PFD, p. 325. These issues are discussed above.

    b. Controller's Financial Planning Tool (Schedule B5.7.1, Line 20)

DTE Electric projected capital expenditures of $2.19 million in the bridge period and $0.613 million in the test year for this project, which implements a financial planning tool for the controller's organization to help manage financial planning processes. *See*, 7 Tr 1958-1959. The Staff found the costs to be premature and recommended that they be excluded from rate base because other options are still being investigated. 8 Tr 5352. The Staff also objected to further information being provided by the company in the rebuttal phase of the case.

The ALJ found that the Staff's adjustment should be adopted. PFD, p. 327. The ALJ noted that the business case document, located at Exhibit A-24, Schedule N1.9, clearly states that "other solutions are being investigated." PFD, p. 327 (quoting the exhibit). The ALJ found that the Commission has provided a clear directive that placeholders, accompanied by more complete information that is not provided until rebuttal, are unacceptable. The ALJ found that the rebuttal, in any case, "raises more questions than it answers." PFD, p. 328.

In exceptions, DTE Electric argues that the project is in progress and thus the Staff's concern is irrelevant. The company also objects to the criticism for having addressed this issue on rebuttal, asserting its right to submit rebuttal on any issue raised by the Staff. Even assuming there is an issue with the accuracy of the estimate, the company argues that there should be a 20% disallowance rather than 100% because clearly the cost is not $0, and 20% is consistent with the Level 2 cost estimate reductions. DTE Electric's exceptions, p. 145.

In reply, the Staff argues that simply because the company indicated in rebuttal that it had selected a vendor does not make the project's costs reasonable and prudent. Staff's replies to exceptions, pp. 12-13.

The Commission agrees with the Staff and the ALJ. As the Staff noted, DTE Electric's direct case indicated that solutions were still being investigated, making the project clearly preliminary. The fact that the project had progressed a bit further by the time of rebuttal does not mean that the Staff and other parties were able to perform a thorough review of the evidence at that time. The information about the selection of the vendor needed to be provided with the direct case (but was not available because other options were still being explored). The Commission adopts the findings and recommendations of the ALJ.

c. Reservation Application (Schedule B5.7.1, Line 21)

DTE Electric projected $0.5 million in bridge period spending for this cost category, an IT program that allows the reservation of office space. 7 Tr 1960. The Staff recommended rejection of the full amount, arguing that it is unnecessary and that there are less expensive options available. 8 Tr 5347-5348.

The ALJ found that nothing in the record shows that the company considered any alternatives, and that the Schedule N and B documents for this cost category do not match. PFD, p. 330.

In exceptions, DTE Electric argues that the ALJ did not specify her recommendation, but notes that Appendix E to the PFD reflects the disallowance of the Staff's proposed amount. DTE Electric argues that this finding is in error because the company continues to be required to maintain employee health and safety measures including social distancing and contact tracing, and must be prepared for future outbreaks. DTE Electric's exceptions, p. 144.

In reply, the Staff maintains its arguments. Staff's replies to exceptions, p. 12.

The ALJ appears to have adopted the Staff's proposed disallowance and the Commission agrees. As the ALJ noted, the discrepancies between the Schedule N and B documents are troubling. The Commission acknowledges that hybrid work arrangements and other changes in the workplace continue to occur, but agrees with the Staff that alternatives should have been explored and the proposed cost should have been properly supported. The Commission adopts the findings and recommendations of the ALJ.

4. Customer Service (Sustainment) (Exhibit A-12, Schedule B5.7.2)

a. Level 1 Estimates (Schedule B5.7.2, Lines 7, 13, 19)

As discussed above, the ALJ found that the Staff's proposed exclusion of Level 1 test year estimates should be adopted. PFD, p. 331. This issue is addressed above.

b. Level 2 Estimates (Schedule B5.7.2, Lines 1-6, 10-12, 14-15, 17-18, 20)

As discussed above, the ALJ found that the Staff's proposed 20% reduction to Level 2 cost estimates for the bridge and test year periods should be adopted. PFD, p. 331. This issue is addressed above.

5. Customer Service (Strategic, Enhancements & Compliance) (Exhibit A-12, Schedule B5.7.3)

DTE Electric reported 2020 capital expenditures of $41.77 million, and projected $39.69 million for 2021, $57.89 million for the 10-month bridge period, and $56.44 million for the test year. This cost category deals with the customer experience (designated as "journeys") and the company's culture of customer service. 7 Tr 2153-2163. The Staff recommended rejection of several line items based on a lack of convincing evidentiary support. The Staff argued that DTE Electric failed to show that its method for identifying these projects served the interests of customers, testifying that "the company admits that they declined to research customer service best practices with peer utilities, instead opting to research and adopt best practices of successful private companies (Company Exhibit A-24, Schedule N1.345; Company CLK 1.17 audit response, Staff Exhibit S-24)." 8 Tr 5489-5490. The Staff added that, based on the Staff's extensive experience with customer complaints, ratepayers are primarily concerned with "actual reliability, cost of service, meter reading, and accurate billing, not in alternative technologies to communicate with the company." 8 Tr 5490. The Staff noted that DTE Electric's customers are a captive market with no opportunity to shop based on price or quality of service. Staff's initial brief, pp. 125-126. DTE Electric countered that it wanted to supply the best possible experience. MI-MAUI/Ann Arbor and the DAAOs supported the Staff's position.

The ALJ provided an overview of these arguments and moved on to make rulings on specific line items (which are addressed in each subheading below).

In exceptions, MI-MAUI/Ann Arbor supported the Staff's position on IT costs for customer service and argued that the ALJ incorrectly allowed $147,666 in proposed customer service costs related to call volume, which was opposed by the Staff. MI-MAUI/Ann Arbor's exceptions, p. 5 (citing PFD, p. 336). MI-MAUI/Ann Arbor argue that "call volumes are unlikely to be reduced by spending $147K to allow customers more ways to ask questions." MI-MAUI/Ann Arbor's exceptions, p. 5. MI-MAUI/Ann Arbor believe that the cost was approved because the ALJ at page 336 of the PFD, in describing DTE Electric's arguments, states that "the Company appropriately identified product and service providers that are considered the 'best' in delivering the key elements of a distinctive experience." MI-MAUI/Ann Arbor's exceptions, p. 6.

In reply, DTE Electric notes that MI-MAUI/Ann Arbor fail to cite to the record or to any legal authority, making their exception improper under Mich Admin Code, R 792.10435(3). The company argues that it is unclear what exactly these parties are excepting to, and the company offers that the ALJ was simply summarizing the evidence in the quote stating that "the Company appropriately identified product and service providers that are considered the 'best.'" DTE Electric's replies to exceptions, p. 25 (quoting PFD, p. 336). The company also asserts that MI-MAUI/Ann Arbor misunderstand the record when they state that customer service IT expenditures are $147,000. DTE Electric argues that the disallowance request is unfounded and confused, and that whatever the parties consider to be "unlikely" is speculation.

The Commission believes that the quote from the PFD referred to by MI-MAUI/Ann Arbor was simply a description of DTE Electric's argument and not a finding by the ALJ.[32] The Commission declines to adopt MI-MAUI/Ann Arbor's proposed disallowance on this issue.

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[32] DTE Electric's initial brief, p. 132, contains the identical language used by the ALJ.

a. Advanced Customer Pricing Pilot/Time of Use Project (Schedule B5.7.3, Line 1)

DTE Electric projected $18.9 million for the bridge period and $11.2 million for the test year for the advanced customer pricing pilot (ACPP)/time of use (TOU) project, which is the company's response to the Commission's directives in Case Nos. U-18255 and U-20162 to create summer on-peak rates, to be available in 2023. DTE Electric included $2.1 million in contingency costs in the bridge period and $2.1 million in the test year which the Staff and the Attorney General argued should be excluded from rate base. Exhibit AG-1.2; Exhibit S-12.12; 8 Tr 4749-4750, 5338-5340.

The Attorney General also proposed rejection of the remaining amounts, along with immediate suspension of this pilot and disapproval of any additional spending until further evaluation takes place. *See*, 8 Tr 4802-4803. DTE Electric reported $73.4 million in total past and projected costs, which the Attorney General characterized as "extraordinary." Exhibit AG-1.21; 8 Tr 4803; PFD, p. 337, n. 977. The Attorney General argued that the scope of the ACPP/TOU project now goes beyond what was approved by the Commission in the February 4, 2021 order in Case No. U-20602 and other orders in that docket, where the Commission narrowed the six originally proposed pilots down to two. The Attorney General supported a full disallowance and recommended that the Commission direct the company to suspend any further work on this pilot until lower costs can be agreed to and approved. The Attorney General also argued that the alternative TOU proposal was presented too late in the instant case to allow for a proper review.

DTE Electric countered that this pilot was delayed by the pandemic, which increased costs. The company and the Staff presented an alternative TOU proposal projecting lower costs (by about 35%) in Exhibit A-45, Schedule JJ1, and in Exhibit S-23.01. The Staff supported the alternative TOU proposal in Mr. Revere's testimony at 8 Tr 5136-5137; Exhibit S-23.01; and Staff's initial brief, p. 146.

The ALJ found the bridge and test period cost projections for this category to be unreliable, noting that the company failed to provide a breakdown of the components of the projections. PFD, p. 340. She observed that Schedules N1.279-N1.280 still refer to the six pilots originally proposed in Case No. U-20602 (though they do address 2019-2020 costs), and the business case documents also reflect six pilots. PFD, p. 340. The ALJ presented a detailed consideration of the history of the pilots. *Id*., pp. 340-343. She concluded that "DTE has made no effort whatsoever to relate its expense projections in this case to what it accomplished to implement the pilots." *Id*., p. 343. She noted that some schedules are not fully legible and different business case documents cite different objectives. *Id*., pp. 343-344. The ALJ found that:

> [g]iven that the infrastructure required to support full implementation has not yet been determined, and that there is a 2023 business case that is different from the 2022-2023 business case in terms of objectives and total cost, it is unclear that DTE [Electric] had any intention of following the 2022-2023 business plan. This PFD recommends that the Commission decline to include the 2022 and 2023 projections in rates, including the projected O&M expenses. . . . Once the Commission makes a determination as to an appropriate TOU rate design, it should demand a comprehensive analysis from DTE [Electric] of all the work done in prior years and the additional work remaining to be done to implement that selected rate design.

PFD, p. 344.

In exceptions, DTE Electric argues that the Attorney General based her disallowance arguments on a misunderstanding that these projected costs are for implementation of the pilot, whereas the projected costs are actually for the cost of full implementation of the new TOU rates, which the Commission directed must be available by the summer of 2023. DTE Electric notes that it also proposed an alternative TOU implementation plan which reflects a 35% reduction to capital expenditures and which was supported by the Staff. DTE Electric contends that this project "is critical for the successful implementation of TOU rates" and thus the costs should be approved. DTE Electric's exceptions, p. 147.

In reply, the Attorney General argues that whether this is characterized as a pilot or implementation of a full program, it involves "runaway costs." Attorney General's replies to exceptions, p. 50.

This issue is discussed in pages 627-655 of the PFD and is addressed in detail in the Rate Design and Tariffs, Residential, section of this order, below, where the Commission approves the alternative proposal. Having approved the alternative proposal, the Commission approves the capital spending figures shown in Exhibit A-12, Schedule B5.7.3, and Exhibit S-23.01, of $10.059 million for the 10-month bridge period and $9.404 million for the test year minus the contingency amounts of $0.67 million for the 10-month bridge period and $1.88 million for the test year, for a total of $9.389 million for the 10-month bridge period and $7.524 million for the test year. The company is no doubt familiar with the Commission's long-standing policy of excluding contingency amounts from rate base, which has been explained in numerous orders. *See*, November 19, 2015 order in Case No. U-17735 (November 19 order), pp. 7-11; December 11, 2015 order in Case No. U-17767, pp. 19-20; December 9, 2016 order in Case No. U-17999, pp. 4-6; January 31, 2017 order in Case No. U-18014 (January 31 order), pp. 12-13; March 29 order, p. 11; April 12, 2018 order in Case No. U-18370, p. 5; September 13, 2018 order in Case No. U-18999, p. 5; May 2 order, p. 6; September 26, 2019 order in Case No. U-20322, p. 41; December 17 order, p. 9; and December 22 order, p. 11.

b. Level 1 Estimates (Schedule B5.7.3, Lines 15-16, 19, 29, 41, 54, 56, 58)

The ALJ again recommends adoption of the Staff's proposed exclusion of test year amounts. This issue is addressed above. PFD, p. 344.

c. Level 2 Estimates (Schedule B5.7.3, Lines 2, 4-6, 8-13, 22-27, 31, 38, 44-46, 48-49, 53, 55, 57)

The ALJ again recommends adoption of the Staff's proposed 20% reduction to bridge and test year amounts. This issue is addressed above. PFD, p. 345.

d. Automated Application Monitoring Enhancement (Schedule B5.7.3, Line 21)

DTE Electric projected spending $2.4 million in the bridge period and $0.36 million in the test year for SAP system enhancements that "provide the Customer IT teams the ability to plan, implement, test, operate and enhance business processes more efficiently." 7 Tr 2183. The Staff recommended excluding these capital expenditures from rate base on grounds that they were not shown to improve safety or reliability and were not shown to have benefits for customers. 8 Tr 5354. DTE Electric offered new information on rebuttal that the Staff found unpersuasive. Staff's initial brief, pp. 110-111.

The ALJ found that DTE Electric's exhibits did not support its arguments, and stated that:

> [a] review of the business case documents for this project (one for 2021 spending and one for 2022 spending) show a hodge-podge of technical changes, but nothing about any savings and no quantification of any system improvements. This PFD finds that Staff's position should be adopted. DTE [Electric] has been given multiple opportunities to present quantification of the benefits of its proposed projects as part of its direct case, but such offerings are not persuasive or reliable when offered in rebuttal. . . . [E]ven if DTE [Electric] were to realize the claimed savings from this "project," it is not at all clear what the cost of those savings would be, intermingled with the rest of the activities and objectives in these documents.

PFD, pp. 346-347 (citing Exhibit A-24, Schedules N1.290 and N1.291).

In exceptions, DTE Electric argues that it did quantify the benefits of the project, noting that it offered evidence showing that the system's uptime would be improved by 1% and unplanned outages would be reduced by 1%, which "equates to an approximately $50,000 per year reduction in IT support time to resolve unplanned events (Pizzuti, 7 [Tr] 2255)." DTE Electric's exceptions,

p. 140. DTE Electric contends that the project also brings non-quantifiable benefits such as user experience monitoring.

In reply, the Staff argues that the company provided no evidence showing that this project will improve safety or reliability, and the alleged savings of $50,000 per year (information provided on rebuttal) are still “insubstantial in comparison to the investment cost.” Staff’s replies to exceptions, p. 11.

The Commission agrees and adopts the findings and recommendations of the ALJ. The ALJ described the confusion caused by the documents meant to support the project and noted the lack of any information quantifying the benefits of the project for ratepayers. The goal of using less time to resolve unplanned IT events does not appear to be worth the cost, in the absence of more information about the benefits.

e. Supporting Capabilities Test Data (Schedule B5.7.3, Line 30)

DTE Electric projected spending $0.914 million in the bridge period and $0.256 million in the test year for this cost category which will allow the generation of automated test data and test scripts in the SAP system. 7 Tr 2185. The Staff recommended the exclusion of these amounts from rate base on grounds that they were not shown to improve safety or reliability and were not shown to have benefits for customers, and the Staff opined that such amounts are better spent on the company’s aging infrastructure. 8 Tr 5355.

The ALJ recommended adoption of the Staff’s proposal, finding that DTE Electric failed to demonstrate that the project would generate greater efficiency or that the expense is justified. PFD, p. 349.

In exceptions, DTE Electric argues that this project, like other disallowed individual IT service projects, will increase efficiency and will improve IT project testing processes, add testing functionality, and reduce the possibility for adverse events. DTE Electric's exceptions, p. 141.

In reply, the Staff argues that the company simply restates its testimony, and the Staff reiterates that this enhancement is not necessary or required. Staff's replies to exceptions, p. 11.

The Commission agrees and finds, as the Staff points out, that the testing process will continue to occur without this investment; and, again, the company provided no quantification of benefits. The Commission adopts the findings and recommendations of the ALJ.

f. Authentication and Identity Management Software (Schedule B5.7.3, Line 33)

DTE Electric projected spending $0.91 million in the bridge period for software updates that will allow customers to use third-party forms of identification, such as their Google or Facebook logins, to communicate with the company. 7 Tr 2203-2204. The Staff recommended removing this amount from rate base, noting that the company failed to show how it will protect the identification data and address privacy issues. 8 Tr 5356.

Noting that DTE Electric did not file rebuttal on this issue or brief it, the ALJ found that the Staff's adjustment should be adopted. PFD, p. 350.

No exceptions were filed on this issue. The Commission adopts the findings and recommendations of the ALJ.

g. Digital Experience Group Projects (Schedule B5.7.3, Lines 42-43, 49)

DTE Electric reported spending $5.2 million in 2020 for the Digital Experience Group (DEG), and projected spending $6.5 million in 2021 for the Digital Transactional Experience, and $5.4 million in the bridge period and $4.2 million in the test year for the Journey Work Product Transformation Teams. *See*, 7 Tr 2192. DTE Electric argued that these capital expenditures support improvements to the move in/move out (MIMO) and outage experiences for customers. 7 Tr 2192-2198. The Staff recommended a 60% reduction to the 2020 spending and a 20% reduction to the bridge and test period spending, again emphasizing that customers' core concerns are with reliability, affordability, correct meter reading, and accurate billing, and arguing that the company's evidence provides little detail on customer benefits in relation to customer costs. 8 Tr 5493-5498; Exhibits S-24 and S-12.4. Noting that DTE Electric already has high rates of completion and satisfaction, the Staff argued that the company failed to show how this spending would increase those rates or reduce costs for ratepayers. 8 Tr 5496-5497. Again, the Staff opined that there is a finite level of customer satisfaction that may be achieved with a captive market.

The Attorney General also argued that the Commission should exclude amounts for the bridge period and test year based on lack of evidentiary support. 8 Tr 4809-4810; Exhibit AG-1.23. The Attorney General argued that there was no BCA for this spending. Exhibit AG-1.71.

DTE Electric countered that customers increasingly desire digital and self-service options and defended its need to hire additional customer service representatives (CSRs). 7 Tr 2260-2261, 1642-1644.

The ALJ found that 60% of 2020 spending should be disallowed and recommended disallowing the entirety of the remaining amounts for 2021 through the test year on grounds that they are unsupported (noting that 20% of test year amounts had already been removed per the findings on Level 2 cost estimates). PFD, p. 362. The ALJ found that:

> Although duplication or overlap between the company's spending through this program and myriad other programs targeted at the company's web page, customer journey, and digital transactions was raised as a concern in Case No. U-20561, and . . . again in this case, DTE [Electric] made no effort to establish the specific additional contributions from the spending on these teams. [DTE Electric's witness] . . . did not identify, let alone separate all the additional money DTE [Electric] has spent on its web and self-service programs, nor did she establish that the "achievements" for these teams are directly attributable to any additional

> spending by DTE [Electric], rather than, as she identified, increasing customer interest in digital transactions.

PFD, pp. 362-363. The ALJ again noted the lack of a BCA for the spending and the fact that the company failed to show that its prioritization method is a reliable substitute for the traditional reasonableness and prudency review, which typically relies upon a showing of quantifiable benefits. The ALJ found the prioritization scoring to be subjective and uncompelling and noted that it was not even offered for the full bridge and test period. *Id*., p. 363. The ALJ noted the Staff's concerns regarding the prioritization of IT investments relative to reliability investments and found that "DTE [Electric]'s prioritization model does not purport to compare IT strategic investments to other strategic investment opportunities." *Id*., p. 364. Since no party sought a full disallowance for 2020, the ALJ found that 60% was appropriate.

In exceptions, DTE Electric argues that the ALJ recommended a full disallowance for the bridge and test periods *sua sponte*, and that the decision is unsupported. DTE Electric contends that customers do care about being able to access information digitally, and that improvements in this area have "led to call reduction savings." DTE Electric's exceptions, p. 142.

In reply, the Staff argues that the ALJ was correct. Staff's replies to exceptions, pp. 17-18.

The Commission agrees with the ALJ, the Staff, and the Attorney General. The Commission found that Digital Experience Group projects were not reasonable or prudent in the May 8 order, and, without additional and sufficient support in this record, finds the same conclusion should be reached in this case. May 8 order, p. 141. Once again, the lack of any BCA has not worked in DTE Electric's favor. The Commission acknowledges that customers increasingly seek digital transactions. However, DTE Electric made no effort to show how past expenditures have resulted in benefits to ratepayers or how future investments would do so. As the Staff notes, the company already enjoys high rates of self-service completion and customer satisfaction. 8 Tr 5496-5497.

With this information, as the ALJ points out, it is difficult to see what the benefit of the additional investment will be in order to determine reasonableness and prudence. The Commission adopts the findings and recommendations of the ALJ.

h. Platform Integration – SAP Integration Business (Schedule B5.7.3, Line 51)

DTE Electric projected $1.8 million in bridge period spending and $0.5 million in test year capital spending to redesign and optimize the management of its core data systems. *See*, 7 Tr 2203. The Staff recommended that all of these projected costs be excluded from rate base on grounds of insufficient evidence; the lack of any demonstrated potential benefits to safety, reliability, or customer savings; and the failure to consider alternatives. 8 Tr 5353.

The ALJ recommended adoption of the Staff's proposed disallowance, finding that the company failed to offer any benefits from the proposed spending. PFD, p. 366.

In exceptions, DTE Electric argues that this project will streamline interactions and communications with customers and lead to a better customer experience, and states that "[t]he Company has not articulated the quantitative benefits from this project because the benefits of integration are inherent." DTE Electric's exceptions, p. 139.

In reply, the Staff argues that the business case exhibits and direct testimony for this investment were incomplete and that the company failed to identify any alternatives that it considered. Staff's replies to exceptions, p. 10.

The Commission adopts the findings and recommendations of the ALJ. DTE Electric failed to identify how the project would benefit customers, and it is clear that at least some of the potential benefits could have been quantified. No such information was provided on the record.

i. Pre-pay Program (Schedule B5.7.3, Line 52)

DTE Electric presented costs for this program, but also explained that a decision on approval of the program is pending in Case No. U-21087. The Staff and the Attorney General objected to the costs as, therefore, premature. 8 Tr 5492-5493, 4805-4808.

The ALJ agreed with the Staff and the Attorney General and found that the company may seek cost approval once it receives approval of the program. PFD, p. 366.

In exceptions, DTE Electric argues that, while it is true that Case No. U-21087 must be resolved and the relevant rule waivers must be received before it can proceed with this project, the costs themselves are ready for review in the instant case and the company should not be required to pursue them in a later rate case. DTE Electric's exceptions, pp. 142-143.

In reply, the Staff argues DTE Electric may not recover investment costs until the program is approved and the rule waivers are approved, and for that reason the Staff did not review these costs for reasonableness and prudency. Staff's replies to exceptions, p. 18. The Staff notes that the PFD has issued in Case No. U-21087 and the administrative law judge in that case found that both the program approval and rule waiver requests should be denied.

In her reply, the Attorney General argues that these costs cannot be approved and also points to the findings of the PFD in Case No. U-21087. The Attorney General posits that program proposal requests should not be bifurcated from cost recovery requests. Attorney General's replies to exceptions, p. 49.

The Commission agrees with the ALJ, the Staff, and the Attorney General on the issue of cost approval and adopts the findings and recommendations of the ALJ. DTE Electric may seek these costs in a future rate case if and when the necessary approvals/waivers are eventually obtained.

The issue of the presentation of pilot program cost recovery requests is addressed both above and below, in this order.

j. Projects with No Business Case (Schedule B5.7.3, Line 60)

The Staff identified several projects lacking a supporting business case document and recommended disallowance of the associated projected spending. Exhibit S-12.7. DTE Electric explained that it had mistaken the threshold amount for projects requiring a business case document, but sought approval for one particular project for which it presented the business case document in rebuttal at Exhibit A-40, Schedule GG1.

The ALJ agreed with the Staff and recommended disallowance of all the amounts reflected in Exhibit S-12.7 associated with the projects that lacked a business case document in the company's original filing. PFD, p. 367.

In exceptions, DTE Electric argues that it should still recover the $0.36 million sought for the single item which it submitted on rebuttal. DTE Electric's exceptions, p. 131.

In reply, the Staff argues that it could not thoroughly evaluate the rebuttal submission. Staff's replies to exceptions, p. 9.

The Commission adopts the findings and recommendations of the ALJ. As DTE Electric knows, the examination of reasonableness and prudency is hampered by the lack of information accompanying the direct case.

6. Plant and Field Projects (Exhibit A-12, Schedule B5.7.4)

a. Level 1 Estimates (Schedule B5.7.4, Lines 6, 15, 18, 24, 25, 34, 36-38)

As discussed above, the ALJ found that the Staff's recommendation to exclude Level 1 estimates should be adopted. PFD, p. 367. This issue is addressed above.

b. Level 2 Estimates (Schedule B5.7.4, Lines 1, 4, 8-9, 11-13, 16, 19, 21-22, 33)

As discussed above, the ALJ found that the Staff's recommendation to reduce Level 2 estimates by 20% should be adopted. PFD, p. 368. This issue is addressed above.

c. Capitalization (Schedule B5.7.4, Lines 2, 3, 5, 31)

The Staff argued that DTE Electric is improperly capitalizing items that should instead be included in O&M, including these four IT line items related to ClickSoft Application Health (ClickSoft), Distribution Operations Application Health (DOAH), Fuel Supply Application Health (FSAH), and FERMI Enhancements (FERMI). 8 Tr 5227-5230, 5234-5236; Exhibit S-7.17. The Staff testified that IT upgrades and system enhancements do not belong in capital expenditures unless they meet all of the following three criteria: (1) add significant additional functionality, (2) result in a new software design or an alteration of an existing software design, and (3) exceed the $10,000 threshold. 8 Tr 5189-5190, 5194-5195. The Staff also argued that certain data management costs can be capitalized only by Commission order. DTE Electric countered that these line items add functionality. 7 Tr 2794-2796.

In addition to arguing that these costs belong in O&M rather than rate base, the Staff reduced the overall amount sought by the company based on historical underspending by a total of $6.05 million, including $3.665 million for the bridge period and $2.384 million for the test year, and recommended that the "costs should be expensed (O&M) and not capitalized due to the Company's own accounting guidance." 8 Tr 5230. For ClickSoft, the Staff argued that 35% of projected 2020 capital costs were not spent in the historic test year and recommended a 50% disallowance for both projected O&M and capital costs which, because they balanced each other out, resulted in a "total O&M reduction of $0." 8 Tr 5234; Exhibit S-7.50. For DOAH, the Staff noted that the company spent only 52% of its projected costs for 2020 and recommended a concomitant reduction to the company's proposed O&M (a reduction of $14,400) and a shifting of the remaining rate base amount to O&M (an increase of $684,840), for a total increase to O&M of $670,440. 8 Tr 5235; Exhibits S-7.44, S-7.50. For FSAH, the Staff noted that the company spent 86% of its projected capital costs in 2020 and recommended the same type of adjustment to the capital costs prior to shifting those capital costs to O&M (an increase of $404,200 to O&M). 8 Tr 5235; Exhibit S-7.50. For FERMI, the Staff made no O&M adjustment. 8 Tr 5235.

The ALJ found that DTE Electric failed to adequately describe the additional significant functionality claimed to be provided by the listed line items and failed to address the change to software design that constitutes the second prong of the requirements for capitalization. PFD, p. 371. The ALJ further found that:

> DTE [Electric] did not provide the accounting for any of the cited projects to show that all capital and O&M expenses associated with that project were properly capitalized in 2021, for those line items with 2021 spending, or provide a breakdown of its projections to show the capital and non-capital activities for the bridge period and test year included in the project objectives. Given the limited support DTE [Electric] provided for its IT capital expenditures generally, this PFD recommends that the projections identified by Staff be excluded from rate base, but rejects Staff's adjusted O&M transfer. DTE [Electric] will capitalize what it decides can be capitalized of the future bridge period and test year expenses, and providing the funding in O&M will not prevent that.

PFD, p. 372.

In exceptions, DTE Electric argues that these amounts should not be excluded from rate base, and notes that (with the exception of Corporate Support Group) the ALJ appears to have recommended the capital disallowance without also recommending the corresponding shift of the disallowed amounts to O&M, which the company argues is necessary. DTE Electric's exceptions, pp. 131-134 (citing PFD, pp. 372, 494). The company describes the PFD as confusing and defends its capitalization policy, arguing that these amounts should, in any case, remain capital expenditures. DTE Electric argues that the disputed projects do provide significant new functionality. For ClickSoft, DTE Electric states that "the programming changes that add significant functionality will be identified in the third quarter of 2022 and only the upgrades and costs that agree with DTE Electric's policy will be capitalized. (Uzenski, 7 [Tr] 2793)." DTE Electric's exceptions, p. 132. For Distribution Operations, the company states that enhancements include new hardware and servers, as well as updated software; and for Fuel Supply, enhancements include automated processing and replacement software. DTE Electric also argues that the Staff's proposed disallowance appears to duplicate a disallowance for the DERMS projects. DTE Electric contends that its capital requests are sufficiently mature and are appropriate under its capitalization policy.

No replies to exceptions were filed.

The Commission agrees with the Staff and the ALJ that the record does not reflect the level of evidentiary support needed to justify these proposed costs for capitalization under the three criteria, and finds that they should be disallowed from rate base. The Commission notes that while the ALJ "rejects Staff's adjusted O&M transfer" on page 372[33] of the PFD (in Rate Base), she appears to accept the transfer on page 494 of the PFD (in Adjusted Net Operating Income), where she states that "this PFD concludes it is reasonable to increase the O&M expenses by the amount requested by Staff." The Commission agrees with the Staff that these cost categories should be shifted to O&M, and that the remaining amounts (after the Staff's proposed disallowances) are reasonable and prudent; thus, the Commission adopts the ALJ's second recommendation on this issue, as is addressed in the discussion of Net Operating Income, below. The Commission

[33] The Commission acknowledges that perhaps the ALJ was referring to the transfer of the full amount.

approves for transfer to O&M the total of $670,440 ($684,840 minus $14,440) for ClickSoft, and $404,200 for FSAH. 8 Tr 5235; Exhibits S-7.44, S-7.50.

The broader issue of DTE Electric's capitalization policy is addressed below.

d. Projected vs. Historical Spending (Schedule B5.7.4, Lines 7, 10, 35)

The Staff compared 2020 actual spending to 2020 projected spending for certain cost categories and recommended reductions to projected 2021 spending on the basis of the percentage of the 2020 projected costs that were actually spent. The Staff recommended a reduction of $59,000 in the 2021 expense estimate for the Nuclear Generation Business Systems Replacement project based on the fact that the company spent 91% of its 2020 projection for this category, and a reduction of $1.4 million to the 2021 expense estimate for the Plant & Field Document Repository project based on the fact that the company spent 34% of its 2020 projection. 8 Tr 5230-5232; Exhibit S-7.46. For the Service Suite Field Management Product Improvement project, the Staff recommended reductions to the 2021, 10-month bridge period, and test year projections of $19,800, $247,782, and $69,373, respectively. DTE Electric countered that these projects are still in progress and the combined actual spend for each of them over the years covered by the May 8 order was well above the combined projected spend. 7 Tr 2139; Exhibit A-40, Schedule GG4.

The ALJ "agrees that the historical underspending in one year, 2020, is not a sound basis to adjust DTE [Electric]'s 2021 projection in the absence of any other evidence that its 2021 estimate of actual 2021 spending is inaccurate." PFD, p. 374. However, the ALJ found that the reductions to the 10-month bridge and test period projections should be adopted for the Service Suite Field Management Product Improvement project because the company failed to present "a detailed basis for its cost projections and 2022-2023 spending is not known at this point." *Id*.

In exceptions, DTE Electric argues that the 2022-2023 disallowance is not supported because the Staff used a small sample size as a basis. DTE Electric states that these projects are prudent and in progress now and points out that actual spending in 2020 was higher than what was projected in Case No. U-20561 for "the sample of projects chosen by Staff." DTE Electric's exceptions, p. 137.

The Commission agrees with the disallowances for the 10-month bridge period and test year for the single cost category of Service Suite Field Management Product Improvement based on the lack of evidentiary support identified by the ALJ. The Commission adopts the findings and recommendations of the ALJ.

e. Distributed Energy Resource Management System Implementation (Schedule B5.7.4, Line 27)

DTE Electric acknowledged that this DERMS line item was duplicative of a line item in the distribution operations capital expenditure projections and indicated that it should be removed from IT spending. Conversely, the Staff recommended removal of the item from the distribution spending. Treating it as an IT line item, the Staff also recommended excluding the projected bridge period expenditure of $1.3 million and the projected test year expenditure of $364,667. 8 Tr 5232-5234. The Staff argued that the company has not selected a vendor for Phase 1 of the project, indicating that the project is premature for capitalization.

The ALJ found that the company is still performing a preliminary analysis and the proposed bridge and test period spending should be excluded from rate base. PFD, p. 375.

No exceptions were filed on this issue and the Commission adopts the findings and recommendations of the ALJ.

f. Projects with No Business Case (Schedule B5.7.4, Line 40)

The Staff identified three projects on Schedule B5.7.4 with no supporting business case document, but with total test year spending of $867,000. Exhibit S-12.7, p. 6. DTE Electric again explained that it had applied an incorrect threshold for the business case document requirement and agreed with the Staff's adjustment. DTE Electric's initial brief, p. 127. The ALJ found that the issue was resolved. PFD, p. 375.

No exceptions were filed on this issue and the Commission adopts the findings of the ALJ.

7. Information Technology (Exhibit A-12, Schedule B5.7.5)

a. Level 2 Estimates (Schedule B5.7.5, Lines 1, 4, 8-9, 11-13, 16, 19, 21-22, 33)

As discussed above, the ALJ recommended adoption of the Staff's proposed 20% adjustment to Level 2 cost estimates. PFD, p. 376. This issue is addressed above.

b. Governance Risk and Compliance Tool Expansion for Regulatory Assets (Schedule B5.7.5, Line 7)

The company states that the governance risk and compliance (GRC) tool expansion will enable DTE Electric to know whether an IT asset has an associated compliance rule without the risk of human error being involved. *See*, 7 Tr 2044. The company reported that $0.1 million was spent in 2020, and projected spending $0.5 million in the full bridge period. The Staff recommended exclusion of the bridge period amount from rate base, noting that the task would still be accomplished without the addition of this software, and the Staff determined that the task could be accomplished at a cost of $23,400 per year. 8 Tr 5360. DTE Electric pointed out that this asset is a shared asset.

The ALJ discussed the GRC issue without making a recommendation. PFD, p. 377.

In exceptions, DTE Electric notes that the ALJ did not offer a recommendation. DTE Electric argues that this project has benefits that go beyond saving time, because the project will ensure that IT assets are in regulatory compliance and meet risk standards. The company also reminds the Commission that any disallowance for a shared asset must also be removed from projected net operating income. DTE Electric's exceptions, p. 146.

In reply, the Staff argues that the ALJ adopted the proposed disallowance. In answer to DTE Electric, the Staff states that:

> if DTE Gas Company [DTE Gas] does an incomplete job justifying the project level shared asset costs as in Case Number U-20940, Staff will be considering downward adjustments for shared assets in that case. (Rogers, 8 TR 5371.) Staff also emphasizes that if something new is discovered regarding a shared assets project in a gas rate case or if DTE Gas Company did not receive any benefits from the investment, Staff will also recommend a disallowance.

Staff's replies to exceptions, p. 14.

The Commission adopts the Staff's recommended disallowance. The Staff presented convincing evidence of the substantial amount of money that could be saved in the absence of this project, and the Commission agrees that regulatory compliance will continue in any case.

c. Projects with No Business Case (Schedule B5.7.5, Line 28)

Once again, the Staff identified projects which lacked a supporting business case document, and DTE Electric agreed to the adjustment. DTE Electric's initial brief, p. 127. The ALJ found the issue to be resolved. PFD, p. 377.

No exceptions were filed on this issue and the Commission adopts the findings of the ALJ.

8. Information Protection Security (Exhibit A-12, Schedule B5.7.6)

Finding that the only disputed issues on this schedule involve the Level 1 and 2 cost estimates, the ALJ again noted that these issues were decided above, and recommended adoption of the Staff's exclusion of Level 1 costs and 20% reduction to Level 2 costs. PFD, p. 377. These issues are addressed above.

9. Infrastructure Operations (Exhibit A-12, Schedule B5.7.7)

a. Level 2 Estimates (Schedule B5.7.7, Lines 1-2, 4-6, 8-10, 12-14, 16-17, 19)

As discussed above, the ALJ recommended adoption of the Staff's proposed 20% reduction to these Level 2 cost estimates. PFD, p. 378. This issue is addressed above.

b. Projected vs. Historical Spending (Schedule B5.7.7, Line 3)

The Staff proposed a reduction to the 2021 projected spending in this cost category based on the fact that DTE Electric spent only 94% of its 2020 projection as reflected in the May 8 order. Exhibit S-7.46. The ALJ recommended rejection of the proposed reduction, because, as discussed above, "this PFD does not find this a reasonable adjustment given the availability of actual spending for 2021." PFD, p. 378.

No exceptions were filed on this issue, and the Commission adopts the findings and recommendations of the ALJ.

c. Virtual Desktop Infrastructure (Schedule B5.7.7, Line 15)

DTE Electric projected about $0.203 million in spending in the bridge period and $0.252 million in the test year to enhance its virtual desktop infrastructure in light of the increasing number of employees working remotely. *See*, 7 Tr 2097. The Staff recommended exclusion of the full amount, arguing that a survey shows that 42% of employees are working exclusively from home, and that the number of employees working remotely is decreasing rather than increasing. 8 Tr 5356-5358; Exhibit S-12.7.

The ALJ found that the proposed spending should be included in rate base because, even though fewer employees are working from home, the project is still needed for those working remotely. PFD, p. 379.

In exceptions, the Staff argues that this expense is no longer necessary because fewer employees are working remotely compared to 2020-2021. Staff's exceptions, p. 2. The Staff again notes that 42% of employees are working from home and 19% are working both from home and from work. *Id*. The Staff contends that if this enhancement was not necessary in 2020-2021, it certainly is not necessary now when remote work is decreasing. The Staff acknowledges that the amount is small, but argues that even small amounts should not be passed on to ratepayers if the cost is unnecessary. Alternatively, the Staff recommends disallowance of 20% of both the bridge and test period amounts consistent with the Level 2 cost estimate adjustments.

In reply, DTE Electric argues that employees will continue to work from home or in a hybrid fashion. DTE Electric's replies to exceptions, p. 27.

The Commission agrees with the ALJ and allows the spending in rate base, subject to the 20% disallowance of Level 2 cost estimates that has already been approved. While remote work is decreasing, it has certainly taken on a permanent character for many employees, making virtual infrastructure uniquely important. The Commission adopts the findings and recommendations of the ALJ.

d. Command Center Stand Up (Schedule B5.7.7, Line 18)

DTE Electric proposed $0.46 million in spending for the test period and $0.044 million for the test year associated with construction of the IT Operations Command Center. *See*, 7 Tr 2099-2100. The Staff proposed a full disallowance and argued that the company failed to present evidence of how this project will benefit the safety or reliability of electric service and failed to show in what way the company's current physical space is inadequate. 8 Tr 5358-5359.

The ALJ found that "[a] review of the business case documents in Schedules N1.208 and N1.209 for this project line confirms the ambiguity Staff has identified. This PFD finds that DTE has not supported the reasonableness and prudence of its expenditures and they should be excluded from rate base." PFD, p. 381.

In exceptions, DTE Electric argues that the Command Center supports key business operation processes and helps the company fulfill customer service requirements. DTE Electric's exceptions, p. 145.

In reply, the Staff argues that DTE Electric failed to refute the Staff's points. Staff's replies to exceptions, p. 13.

The Commission agrees with the Staff that the project was not adequately supported in the record and adopts the findings and recommendations of the ALJ.

H. Corporate Services (Exhibit A-12, Schedule B5.8)

1. Electric Vehicle Fleet and Maintenance (Schedule B5.7.8, Line 1)

DTE Electric reported spending $20.7 million in 2020 for the company's fleet of vehicles, with projected 2021 spending of $28.98 million, 10-month bridge period spending of $11.1 million, and projected test year spending of $40.06 million. The Staff proposed a reduction of $20.425 million to the test year projection, arguing that due to the chip shortage and other supply chain problems the company will not be able to hit these spending levels, and noting the difference between previous test year projections and the actual 2021 spend. 8 Tr 5427-5429; Exhibit S-16.1.

The ALJ noted that DTE Electric did not file rebuttal testimony or brief this issue, and recommended that the Staff's adjustment be adopted. PFD, p. 383.

No exceptions were filed on this issue, and the Commission adopts the findings and recommendations of the ALJ.

2. Facilities – Construction and Upgrade (Schedule B5.7.8, Line 2)

DTE Electric reported 2020 expenditures of $32.95 million and projected bridge period spending of $70.25 million and test year spending of $38.96 million for this cost category which includes the maintenance and replacement of items such as roofs, facades, and paving. *See*, 7 Tr 2728. The Attorney General proposed a $3.17 million reduction to projected 2021 spending based on the difference between the projection included in the May 8 order and actual spending for that period, and a $2.89 million reduction to proposed 10-month bridge period spending and a $2.92 million reduction to proposed test year spending based on a three-year average of historical spending (2019-2021). 8 Tr 4812-4813.

Noting that the company did not present rebuttal on or brief this issue, and ALJ found that the Attorney General's proposed adjustment should be approved. PFD, p. 384.

No exceptions were filed on this issue, and the Commission adopts the findings and recommendations of the ALJ.

3. Facilities Renovation (Schedule B5.7.8, Line 3)

DTE Electric reported expenditures of $14.56 million in 2020 for facilities renovation, with projected expenditures of $30.33 million for the bridge period and $1.67 million for the test year. *See*, 7 Tr 2729. The Attorney General proposed a reduction of $8.33 million for the bridge period and $1.67 million for the test year, based on the fact that many employees continue to work remotely (thus requiring fewer facilities) and the company has also instituted a workspace sharing arrangement which allows for the sharing of office space. 8 Tr 4813-4814.

Again noting that this issue was neither rebutted nor briefed, the ALJ recommended adoption of the Attorney General's proposed reductions. PFD, p. 385.

No exceptions were filed on this issue, and the Commission adopts the findings and recommendations of the ALJ.

4. Service Center Optimization (Schedule B5.7.8, Line 4)

The Attorney General proposed a $4.5 million reduction to the company's test year projection, and DTE Electric adopted the adjustment in Attachment A to its initial brief. Thus, the ALJ concluded that this issue was resolved. PFD, p. 386.

No exceptions were filed on this issue and the Commission adopts the findings of the ALJ.

5. Headquarters Energy Center (Schedule B5.7.8, Line 5)

DTE Electric reported costs of $24.9 million for 2020, and projected spending of $8.6 million for the bridge period for the Headquarters Energy Center (HQEC). The HQEC is a new facility that was constructed pursuant to approvals granted in Case Nos. U-20162 and U-20561, and which went into service in November 2021. 7 Tr 2733-2735. The HQEC is an on-site steam production facility that the company pursued in order to discontinue purchasing steam from Detroit Thermal, LLC (Detroit Thermal). The HQEC also provides a new chilled water system. Prior to building the HQEC, the company experienced cost and service reliability issues related to price increases and unplanned outages attributable to Detroit Thermal. *Id*. DTE Electric provided testimony showing that the base net present value (NPV) analysis for the HQEC no longer shows the cost savings that was expected when the project was approved for inclusion in rate base in the prior two rate cases, due to construction cost increases. *Id*. DTE Electric described Detroit Thermal's service as unreliable and the delivery system as old and inefficient, and noted that its steam service no longer offers the environmental benefits available when Detroit Thermal was burning trash rather than natural gas.

The Staff recommended a reduction of $7.7 million to projected bridge period spending based on the current economics of the HQEC project. 8 Tr 5294-5298. The Staff explained that the Commission approved the project in Case No. U-20162 because the evidence on the NPVRR showed a cost advantage to ratepayers of $4.1 million over the status quo; and later, in Case No. U-20561, the project continued to show a $3 million cost advantage over the status quo. However, now the project only appears to present an advantage over the status quo if Detroit Thermal's rates increase at a compound annual growth rate (CAGR) of 7%, which is unlikely. *Id*. The Staff's proposed adjustment is based on bringing the current NPVRR to an amount equal to the status quo. The Staff opined that the additional $8.6 million in costs presented in this case should have been identified while the project was still in development, which would have given the Commission a more accurate picture of the project. The Staff argued that ratepayers should not have to take on cost increases totaling nearly 50% above the original cost estimate. *See*, Exhibits S-10.0, S-10.1. The Staff proposed that, if the Commission finds some of the cost increases to be reasonable, it could adopt a partial disallowance of $3.85 million (half of the proposed disallowance), which reflects "the breakeven point identified in the NPVRR analysis between ratepayers and shareholders." 8 Tr 5298.

The Attorney General proposed a reduction of $5.2 million to reflect cost overruns associated with new gas service and project management costs. 8 Tr 4815-4816.

DTE Electric countered that the cost increases reflected increases to the allowance for funds used during construction (AFUDC), and that Staff's proposed disallowance should be reduced, or should be split between ratepayers and shareholders. 7 Tr 2781-2783.

The ALJ found that the Staff's original adjustment of $7.7 million should be adopted, stating that "DTE [Electric] chose to base its decision regarding this project on saving energy costs; it did not establish that any such savings materialized. The company's contrary analysis was presented in rebuttal, wrongly incorporated only five months of a year, and failed to reflect any natural gas increases at the same time." PFD, p. 392. The ALJ found that natural gas prices must be an element of the comparison between Detroit Thermal's service and the HQEC project. The ALJ further found that:

> DTE [Electric] did not show that it undertook reasonable efforts to confirm its construction costs, including coordinating with the City of Detroit before it presented its savings analysis to the Commission. While DTE [Electric] also cites "increased AFUDC," it did not establish that increase as reflective of anything other than the company's cost overruns, and as the Attorney General argues, did not establish why it labeled AFUDC as "increased project management costs." As stated elsewhere in this PFD, any effort by DTE [Electric] to include AFUDC in rate base should be done transparently.

PFD, pp. 392-393.

In exceptions, DTE Electric argues that it has correctly updated the Staff's alternative analysis and states that it agrees with the Staff's position. DTE Electric asserts that:

> the breakeven point referenced by Staff was based on the updated $47.8 million spend and the assumption that Detroit Thermal's rates would increase at a compound annual growth rate (CAGR) of 4.5%, consistent with actual rates from 2018-2020, which were the rates assumed in the Company's original analysis (Exhibit A-43, Schedule HH4, column (b)). Detroit Thermal's rates actually increased at a 6.2% CAGR from 2020-2022 (Exhibit A-43, Schedule HH4, line 2). Using that actual 6.2% CAGR, the NPVRR for the status quo increases to $68.1 million, as compared to $59.7 million in the original analysis (Exhibit A-43, Schedule HH4, line 4, columns (b) and (c)). The updated breakeven point is $46.4 million (Exhibit A-43, Schedule HH4, line 5, column (c)). Using Staff's method of comparing the updated project cost of $47.8 million to the updated breakeven point of $46.4 million, Staff's proposed $7.7 million disallowance becomes $1.4 million (Uzenski, 7T 2782-2783; Exhibit A-43, Schedule HH4, line 6, column (c)).

DTE Electric's exceptions, pp. 149-150. DTE Electric argues that it was inappropriate for the Staff to reach back to 2019 in its calculation of the CAGR (the Staff used 2019-2021). The company argues that the analysis should be based, as the company did, on 2020-2022, which relies on more recent data and results in a lower disallowance (however, only five months of 2022 were available). Addressing the Attorney General's arguments, DTE Electric states that it explained that "the increased cost of installing gas service was caused by the City of Detroit's requirement to open cut along Fort Street, Third Street, and Plum Street instead of direct boring[,]" and the increase in project management costs was due to an increase in AFUDC. DTE Electric's exceptions, pp. 150-151. DTE Electric contends that the Commission should adopt the Staff's alternative recommendation using the updated $1.4 million figure provided by the company, which results in a disallowance of $0.7 million (due to sharing with shareholders).

In reply, the Staff argues that its CAGR calculation is more accurate because the company's calculation, which relies on data from 2020-2022, includes only the first five months of 2022. The Staff contends that "using this partial data in an analysis that otherwise relies on average annual data skews the calculation." Staff's replies to exceptions, p. 35.

Also in reply, the Attorney General argues that the company's burden is to present its full case in direct testimony and to use rebuttal to clarify information or rebut arguments, but not to present "entirely new analyses and justification for requested recovery." Attorney General's replies to exceptions, pp. 51-52. The Attorney General contends that DTE Electric cherry-picked the data rather than relying on the mathematically correct three full years.

The Commission agrees with the ALJ, the Staff, and the Attorney General and adopts the findings and recommendations of the ALJ. The Staff's calculation uses the three most recent full years of data and incorporates the effect of the rate increase approved in Case No. U-20824 and implemented by Detroit Thermal as of April 1, 2021. *See*, August 11, 2021 order in Case No. U-20824, p. 3. The Commission finds that the Staff's calculation is superior to the CAGR calculation offered by DTE Electric and does not find that any party made a convincing case for the sharing proposal.

6. Enterprise Automation (Schedule B5.7.8, Line 8)

According to the ALJ, the Staff and DTE Electric have resolved differences over the bridge period projections for this cost category, but the Staff also proposed disallowance of the full test year projection of $11 million because the enterprise automation opportunities for that time period have not yet been identified. PFD, pp. 393-395; *see*, 7 Tr 2784-2785; 8 Tr 5362-5365; Exhibit S-12.9.

The ALJ recommended adoption of the Staff's proposed disallowance for the test year spending, finding that the company "has not established sufficient details regarding the automation efforts it will undertake." PFD, p. 395.

In exceptions, DTE Electric argues that the $11 million is now undisputed for 2022, and the company plans to spend the same amount in 2023. DTE Electric's exceptions, p. 152. DTE Electric argues that a 100% disallowance is unreasonable because it leaves the company with $0 for 2023.

In reply, the Staff argues that the company provided no evidence in support of the 2023 spending, and that simply stating that it plans to spend the same amount as was spent in a previous year does not render that amount reasonable and prudent for the stated purpose in the test year. Staff's replies to exceptions, p. 15.

The Commission agrees and adopts the findings and recommendations of the ALJ based on the lack of support for the test year expenditure in the record, as demonstrated by the Staff in its testimony at 8 Tr 5362-5365.

I. Residential Battery Pilot (Exhibit A-12, Schedules B5 and B5.10)

The ALJ stated that this issue is addressed in Section XII of the PFD, and that the costs of this pilot should be excluded from rate base. PFD, p. 395. This issue was fully addressed by the ALJ at pages 588-594 of the PFD. Thus, this issue is addressed by the Commission in the discussion of Other Revenue Related Items, Pilot Programs, below. Because the Commission agrees with the ALJ in its decision to reject the program, for capital expenditure purposes the Commission adopts the Staff's proposed disallowances of $1.1 million for the 10-month bridge period and $3.14 million for the test year. 8 Tr 5377-5382; 7 Tr 2484-2492.

J. Accumulated Provision for Depreciation

The decisions in this order result in an accumulated provision for depreciation of $7,000,638,000.

K. Working Capital

DTE Electric presented a working capital calculation of approximately $1.26 billion. Exhibit A-12, Schedule B4. The company adopted an adjustment of $8.1 million from the Staff, which results in a working capital balance of $1.249 billion. DTE Electric's initial brief, pp. 17-18; PFD, p. 396. The ALJ found that the resulting amount should be approved, as no other party disputed the projected working capital balance. PFD, p. 396. No exceptions were filed on this issue.

The Commission notes that in the Rate Design and Tariffs, Residential section of this order, below, it has approved the deferral of amounts associated with the ACPP/TOU rate regulatory asset request. Therefore, the Commission approves working capital of $1,245,408,000, which is $3,919,000 less than the adjusted amount proposed by DTE Electric of $1,249,328,000.

L. Rate Base Summary

The decisions in the instant order result in a projected rate base of $20,406,679,000.

V. COST OF CAPITAL

A. Capital Structure

DTE Electric proposed maintaining a permanent capital structure of 50% debt and 50% equity, as approved in the May 8 order. 7 Tr 1283, 1287, 1295; *see also*, Exhibit A-14, Schedule D1. The Staff and the Attorney General also set forth a 50/50 debt to equity structure, consistent with the company's proposal. *See*, 8 Tr 4817-4818; 8 Tr 5084. Similarly, ABATE did not dispute the company's proposal. 8 Tr 3066. Initially, MNSC disagreed and proposed a capital structure consisting of 53% debt and 47% equity. 8 Tr 3874, 3942. However, MNSC accepted, for the purposes of this proceeding, DTE Electric's proposal. MNSC's initial brief, pp. 83-84.

1. Common Equity Balance

As described above, there was no dispute remaining on record regarding the company's proposal to maintain a permanent capital structure of 50% equity and 50% debt. The ALJ recommended that the Commission "adopt DTE [Electric]'s proposed common equity balance of $8,426,264,000 which represents approximately 50.0% of the permanent capital structure and 39.62% of the ratemaking capital structure . . . ." PFD, p. 399.

No exceptions were filed on this issue.

The Commission finds that the ALJ's determination on this issue is supported on the record and is, therefore, adopted.

2. Other Debt Balances

DTE Electric set forth a long-term debt balance of $8.410 billion, a short-term debt balance of $265.492 million, a deferred income tax balance of $4.117 billion, and Job Development

Investment Tax Credits balance of $47.376 million. Exhibit A-14, Schedule D1. Neither the Staff nor the Attorney General disputed the company's debt balances. 8 Tr 5084, 4817.

The ALJ noted that the parties agreed with the proposed debt balances to be utilized in the proposed capital structure. Therefore, the ALJ adopted DTE Electric's long-term debt balance, short-term debt balance, deferred income tax balance, and Job Development Tax Credits balance. PFD, p. 399.

No exceptions were filed on this issue.

The Commission finds that there is no dispute on record regarding the proposed debt balances and the ALJ's recommendation is supported on the record. Therefore, the Commission adopts the ALJ's recommendation.

3. Conclusion

The Commission adopts the ALJ's finding that the most reasonable and prudent capital structure is maintaining DTE Electric's existing permanent capital structure of 50% debt and 50% equity. *See*, PFD, pp. 398-399; *see also*, May 8 order, p. 166.

B. Cost Rates

4. Return on Common Equity

The criteria for establishing a fair ROE for public utilities is rooted in the language of the landmark United States Supreme Court cases *Bluefield Waterworks & Improvement Co v Pub Serv Comm of West Virginia*, 262 US 679; 43 S Ct 675; 67 L Ed 1176 (1923) and *Fed Power Comm v Hope Natural Gas Co,* 320 US 591; 64 S Ct 281; 88 L Ed 333 (1944). The Supreme Court has made clear that, in establishing a fair ROE, consideration should be given to both a utility's investors and its customers. The ROE should not be so high as to place an unnecessary burden on ratepayers, yet should be high enough to ensure investor confidence in the financial soundness of the enterprise. Nevertheless, the determination of what is fair or reasonable "is not subject to mathematical computation with scientific exactitude but depends upon a comprehensive examination of all factors involved, having in mind the objective sought to be attained in its use." *Meridian Twp v City of East Lansing,* 342 Mich 734, 749; 71 NW2d 234 (1955). With these principles in mind, the Commission turns to the factors that form the basis for determining the ROE for DTE Electric.

DTE Electric, the Staff, the Attorney General, and ABATE offered analyses of the appropriate ROE. The ALJ provided a detailed summary of the parties' cost of equity analyses and arguments in the PFD. PFD, pp. 399-445.

DTE Electric proposed an ROE of 10.25% utilizing: (1) the Capital Asset Pricing Model (CAPM) and the Empirical CAPM (ECAPM) variation; (2) a Discounted Cash Flow (DCF) analysis, and a multi-stage variation thereof; and (3) a Risk Premium model. DTE Electric explained that its analysis takes place under unprecedented Treasury bond yields, increasing interest rates, rising inflation, and declining growth forecasts for the United States Gross Domestic Product (GDP). *See*, 7 Tr 1308-1310. The company argued that "the systematic risk of electric utilities, as measured by beta, has increased as has the market risk premium, while the risk-free rate as measured by government bonds has declined." 7 Tr 1309.

The company's CAPM and ECAPM analyses were performed using "two scenarios to obtain a range of cost of equity estimates" specifically "a forecasted risk-free rate and (i) a historical MRP [market risk premium] or (ii) a forecasted MRP." 7 Tr 1345. DTE Electric indicated that this analysis resulted in a combined CAPM and ECAPM range of 10.25% to 11.50% for the electric proxy sample "before any DTE Electric risks are considered." 7 Tr 1347. For DCF, DTE Electric calculated both single-stage DCF and multi-stage DCF "using growth rates from *Value Line* and

IBES as well as GDP forecasts from Blue Chip Economic Indicators in the case of the multi-stage DCF." 7 Tr 1348-1349 (emphasis in original). The DCF method resulted in a range from 8.7% to 10.4%; however, the company found the multi-stage results were unrepresentative "because they fail to include the very high near-term GDP growth and are out of line with other results." 7 Tr 1349. Therefore, the company stated the upper half of the estimation to be representative at 9.5% to 10.5%. With respect to the risk premium analysis, DTE Electric applied "the calculated risk premium and a risk-free rate of 2.73%" which "results in an estimated cost of equity of 9.8% for all electric utilities and 9.9% for integrated electric utilities." 7 Tr 1351. The company further explained regulatory comparisons and factors to conclude that DTE Electric is higher-than-average business risk relative to the proxy companies. 7 Tr 1352-1355.

The Staff utilized "a group of twelve publicly traded electric utility companies" to form "a comparable proxy group for Staff's analysis" in the CAPM and DCF analyses. 8 Tr 5085. The Staff calculated an ROE range of 8.90% to 9.90% and recommended an ROE of 9.60%. 8 Tr 5085. In addition, the Staff stated that "a Risk Premium model and a review of gas ROE authorizations from other state jurisdictions from 2020-2021 are also utilized in this case." 8 Tr 5086. Reviewing credit ratings, the Staff stated that the company's credit ratings were unchanged since its last general rate case. 8 Tr 5086. In response to the company's analysis, the Staff argued that the after-tax weighted average cost of capital (ATWACC) adjustment is inappropriate and, when the adjustment is removed, "the outputs are much lower and more in line with Staff's ROE recommendation." 8 Tr 5096.

The Attorney General utilized the DCF, CAPM, and risk premium approaches to recommend an ROE of 9.50%. 8 Tr 4820. The Attorney General "considered the cost of common equity for a proxy group of peer companies." 8 Tr 4821. Starting with 37 electric utilities in the proxy group, the Attorney General narrowed down the group to 13 utilities by eliminating companies due to size considerations, annual revenues, and wildfire liabilities, among other considerations. 8 Tr 4821. Citing Exhibit AG-1.32, the Attorney General compared approved ROEs for several utilities noting that they range from 8.25% to 9.90%, with DTE Electric and Consumers having the highest rates in this comparison. 8 Tr 4839; Exhibit AG-1.32. The Attorney General also averred that a reduction in ROE to 9.50% would be unlikely to affect the company's credit rating. 8 Tr 4840. Further, noting that the Commission has signaled a preference for more gradual reductions, the Attorney General recommended an ROE of 9.50% rather than the 9.17% weighted ROE from her calculations. 8 Tr 4844.

The Attorney General noted that DTE Electric included companies in its proxy group that were excluded from her proxy group and listed several other concerns with the company's proxy group. 8 Tr 4822-4823. Like the Staff, the Attorney General argued that the company's cost of equity was higher due to the ATWACC adjustment which "artificially inflates the cost of common equity." 8 Tr 4828. Additionally, the Attorney General disputed DTE Electric's claims that it has greater risks due to being economically challenged and owning Fermi 2, noting that the company "presents no evidence to support these statements." 8 Tr 4841.

ABATE set forth a range of 9.10% to 9.70%, with its recommended ROE of 9.40%, which is the midpoint of the range. ABATE indicated that it utilized "(1) a constant growth Discounted Cash Flow ('DCF') model using consensus analysts' growth rate projections; (2) a constant growth DCF using sustainable growth rate estimates; (3) a multi-stage growth DCF model; (4) a Risk Premium model; and (5) a Capital Asset Pricing Model ('CAPM')." 8 Tr 3064. ABATE utilized the same proxy group as DTE Electric to conduct its analyses. In addition, ABATE noted that "[c]onsidering the credit ratings and common equity ratio, the indicated cost of equity produced by the proxy group should be considered a conservative estimate." 8 Tr 3068.

In addition, ABATE argued that DTE Electric's calculations do not support the proposed ROE of 10.25% "without one of [the company's] many financial leverage adjustments[,]" which are not appropriate. 8 Tr 3099; *see also*, 8 Tr 3106. Finally, ABATE contended that DTE Electric overstates the company's risk as compared to the proxy group. 8 Tr 3111.

The ALJ concluded that DTE Electric's proposed ROE of 10.25% was excessive and unsupported by the record. PFD, p. 445. The ALJ found DTE Electric's analysis of cost of equity methodologies to be flawed because they were inappropriately adjusted for differences in financial risk. *Id*. (citing 7 Tr 1314). The ALJ stated that "[t]hese adjustments significantly increased [DTE Electric's] calculated ROE percentages under [the company's] DCF and CAPM methodologies." PFD, p. 446. She further agreed with the Staff, the Attorney General, ABATE, and MNSC, and concluded that the "financial leverage adjustments are unnecessary, inappropriate, and have previously been rejected by the Commission." *Id*. (citing January 31 order, p. 66; April 18, 2018 order in Case No. U-18255 (April 18 order), p. 32; and December 9, 2021 order in Case No. U-20940 (December 9 order), p. 91). Therefore, the ALJ concluded that when reducing the company's CAPM average by 1.5%, and the DCF average by 1% to account for the improper financial leverage adjustment, DTE Electric's "ROE range is reduced to 9.0% - 9.9%, with the mid-point being 9.5% (rounded)." PFD, p. 447.

The ALJ next reviewed the record evidence on DTE Electric's credit ratings to conclude that the company "has a favorable credit rating which will allow it to maintain access to capital markets and meet its financial obligations." *Id*., p. 448. The ALJ noted that the company disputed the assertion that DTE Electric is viewed as less risky than its peer group, arguing that having a higher credit score than the peer group does not demonstrate less risk because a credit rating agency does not assess the general risk of the company. The ALJ held that DTE Electric was incorrect and "credit ratings do assess the overall equity riskiness of the company" and that "credit reports assess both business risk and financial risk." *Id.*, p. 449. Quoting Standard and Poor's (S&P's) most recent credit report regarding DTE Electric, the ALJ held that the "credit report confirms that DTE [Electric's] business risk reflects the 'very low risk' of the regulated utility industry, which provides 'indispensable' and 'strategically important' services, while essentially operating as 'a monopoly insulated from market challenges.'" *Id.*, p. 450 (quoting 8 Tr 3065). The ALJ also concluded that the company's claim that its A- credit rating from S&P is comparable to the proxy companies is misleading because DTE Electric's "A- credit rating is one level below one other proxy company credit rating, is the same level as six other credit ratings, and, most significantly, is better than the credit ratings of 20 proxy companies." PFD, p. 450 (citing Exhibit AB-12).

In response to DTE Electric's contention that it is an inopportune time to weaken the company's credit score, the ALJ stated that DTE Electric had not presented analysis of the current or projected credit ratings or metrics to support its claim. The ALJ found, however, that the Attorney General provided evidence to demonstrate that "a reduction of DTE [Electric's] authorized ROE to the level recommended by Staff, the Attorney General and ABATE will not adversely affect DTE [Electric's] credit rating." PFD, p. 451; *see also*, 8 Tr 4840-4841, Exhibit AG-1.35. The ALJ also noted that ABATE presented evidence to demonstrate that if an ROE of 9.4% is adopted, DTE Electric's core credit metric ratios will still support an A- S&P investment grade credit rating. PFD, pp. 451-452; *see also*, 8 Tr 3097.

With respect to capital spending, the ALJ set forth that the latest S&P credit report for DTE Electric "does not express a concern regarding DTE [Electric's] capital expenditures" and that the report actually indicates an expectation that the company "'will continue to fund its investments in a manner that preserves credit quality.'" PFD, p. 452 (quoting 8 Tr 3065).

The ALJ also concluded that DTE Electric's claims that its lack of a revenue decoupling mechanism or fixed variable pricing policy increases its risk of underrecovery of its cost of service was misleading. She noted that some of the other companies within the 27-company sample group also do not have those mechanisms and that DTE Electric:

> benefits from certain regulatory policies including a forward test year for rate cases and an annual PSCR [power supply cost recovery] clause for expenses such as fuel, capacity, energy, transmission, and purchased power, which cost-tracking mechanisms are in effect in states affecting "several of the sample companies," which implicitly acknowledges that these policies are not available for many more of the sample companies. Most significantly, Michigan's "regulatory policy" is scrutinized and evaluated by the credit reporting agencies, with S&P's latest report on DTE [Electric] specifically providing that DTE [Electric] "benefits from supportive regulation in Michigan that provides for forward-looking rate cases and various riders that enhance cash flow predictability."

PFD, p. 453 (citing 7 Tr 1352, 8 Tr 3065). The ALJ also found misleading DTE Electric's assertions of having a higher-than-average business risk considering the Detroit unemployment levels and ownership of the Fermi 2 Nuclear Generating plant. She noted the Attorney General's rebuttal which shows only 10% of DTE Electric's sales relate to City of Detroit residential customers and that other utilities in the proxy group similarly serve economically depressed urban areas. PFD, pp. 453-454 (citing 8 Tr 4841).

Given this analysis, the ALJ concluded that DTE Electric did not justify a higher ROE for the projected test year when considering the removal of the improper financial leverage adjustment, the company's failure to demonstrate an increase due to market conditions, and the fact that DTE

Electric did not present an analysis of its current or projected credit metrics. PFD, p. 454. Rather, she found that:

> unrebutted evidence has been presented which indicates that DTE [Electric] 1) has very strong credit ratings – better than a large majority of the electric proxy group – 2) has relatively minimal business and financial risk, and 3) is able to attract capital. Moreover, [the Staff] testified that recent authorized ROE's for electric utilities by other state commissions – the average authorized ROE decisions for 2020 were 9.44% and 9.38% for 2021 – are within, and thus are supportive of, this range of recommended ROE's in this case. As such, this [ALJ] finds that the ROE's recommended by Staff (9.6%), the Attorney General (9.5%), and ABATE (9.4%) are reasonable and supported by the record.

PFD, pp. 454-455 (footnote omitted).

Quoting the company's testimony, the ALJ notes that "consideration must be given to certain concerns raised by DTE [Electric]." *Id*., p. 455. The concerns include increasing interest rates, the conflict in Ukraine which the company alleges has resulted "'increased uncertainty regarding oil and agricultural prices[,]'" and declining growth in the forecasts for the United States GDP. *Id*., (quoting 7 Tr 1428).

The ALJ stated that consideration must be given to the March 29 order, wherein the Commission held that it would not be realistic to significantly modify the ROE without radical changes in economic conditions. In that regard, she recommended "that the Commission should keep DTE [Electric's] authorized ROE at 9.9%" even though the ROE range set forth by the Staff, the Attorney General, and ABATE were generally supported on the record. PFD, p. 456. She further reasoned that:

> This return is based upon an objectively reasonable analysis consistent with past Commission decisions and the requirements of *Bluefield* and *Hope*, while at the same time acknowledging the potential disruption to the economy that increased interest rates and inflation may cause. This [ALJ] concludes that such an ROE will assure reasonable access to capital on reasonable terms and conditions, while also remaining cognizant of the burden on ratepayers. In the absence of guidance from the Commission, this [ALJ] does not take into account DTE's performance in terms of reliability or other measures of customer service.

Id. Therefore, the ALJ recommended an ROE of 9.90%.

DTE Electric takes exception, arguing that the Commission should adopt an ROE of 10.25% which "is the midpoint of Dr. Villadsen's range of 9.9% to 10.6% and is conservative because DTE Electric has greater-than-average risk[.]" DTE Electric's exceptions, p. 159 (citing 7 Tr 1309-1310, 1355- 1356, 1398). The company also disagrees with the ALJ's finding that the ROEs set forth by the Staff, the Attorney General, and ABATE were reasonable and supported on the record. DTE Electric avers that those proposals are not supported because, as the Commission has emphasized in prior orders, drastic reductions in ROE are not reasonable if unsupported by underlying economic conditions and that, in this case, "the underlying economic conditions support an increase in DTE Electric's ROE, as Dr. Villadsen recommended, rather than any decrease." DTE Electric's exceptions, p. 159. DTE Electric contends that the ALJ's rationale for rejecting the lower ROEs, including rising inflation and interest rates, supports an increase in the ROE. The company further states that the Commission should take judicial notice of the additional increases in interest rates that have occurred in recent months. *Id*., p. 160.

DTE Electric also contends that the ALJ fails to take into account the Commission's recent rulings which note that market factors will continue to be monitored in future cases. DTE Electric's exceptions, pp. 160-161 (citing May 8 order, pp. 176-177; May 2 order; December 9 order, p. 92; and December 17 order, pp. 165-166). The company reiterated its record arguments and further states that it "is a particularly inopportune time to weaken the Company's credit metrics to do the Company's need for capital spending . . . ." DTE Electric's exceptions, p. 162.

DTE Electric avers that the ALJ's discussion is incomplete as it adopts criticisms of the company's evidence "without analyzing those parties' presentations or evaluating them in complete context . . . ." *Id*. Again, citing recent events, the company contends that the lower ROE "recommendations are not even within the range of reasonableness in the current environment of high inflation and rising interest rates." *Id*.

DTE Electric concludes that the ALJ appropriately recognized the challenges the utility is facing and properly rejected the other parties' recommendations to lower the company's ROE. However, DTE Electric disagrees with the ALJ's recommendation as it contends "in the current environment of market uncertainty, DTE Electric's lack of a revenue decoupling mechanism or a fixed variable pricing policy places it at increased risk of under-recovering its cost of service relative to some companies in Dr. Villadsen's sample that benefit from such mechanisms." *Id*., p. 169. In addition, DTE Electric reiterates its record positions to again aver that its ROE should be increased to 10.25% is supported by its record evidence. *See*, *id*., pp. 162-170.

The Staff also takes exception to the ALJ's recommendation to maintain the 9.90% ROE. While the Staff agrees with the ALJ's determination "that Staff had sufficiently provided evidence and support for its case for a 9.60% ROE," the Staff disagrees with the rationale to maintain the 9.90% ROE. Staff's exceptions, p. 9. The Staff avers that "the extent to which interest rates will rise (or fall) in the future is unknown in every rate case," and while interest rates have some effect on ROE, "the projections used in developing Staff's case, and intervenors' cases, were put together by analysts who were aware of the possibility of rising interest rates." *Id*., p. 10. Similarly, the Staff contends that the conflict in Ukraine should not be considered because "the company provided no evidence of a meaningful correlation between international conflicts and utility returns." *Id*. The Staff also argues that "[i]nflation does not affect the cost of assets already owned by the company, and makes the liabilities attached to them relatively less weighty" and "is not directly linked to ROE or cost of capital." *Id*. Finally, the Staff contends that a declining GDP, like inflation, is not directly linked to the ROE but would, in theory, "lead to a lower ROE."

Id. The Staff concludes that the Commission should adopt the Staff's proposed ROE of 9.60%. *Id*., p. 11.

In exceptions, the Attorney General argued that her testimony and brief support the adoption of an ROE not exceeding 9.50%. The Attorney General highlights that ROEs have been declining across the country and that Michigan utilities are "earning above their approved ROEs [which] continues to cost customers more money." Attorney General's exceptions, p. 6. The Attorney General further states that "geopolitical factors outside of DTE [Electric's] control are irrelevant and have no impact on a reasonable ROE for [DTE Electric] and other utilities, and that her recommended ROE already takes into account the cited recent uptick in interest rates." *Id*., p. 7. With respect to the ongoing war in Ukraine, the Attorney General states that generally these situations are irrelevant to the appropriate ROE and there is upheaval during any time of ongoing rate cases. Further, the Attorney General:

> points out that [increasing interest rates are] already accounted for in her analysis and recommended ROE. The [Attorney General's] analysis calculated the true cost of capital at 9.17%. The [Attorney General's] calculated cost of capital, as well as the cost of capital calculated by Staff and other intervenors, is based on a forecasted U.S. Treasury rate, which already includes the expectations of higher interest rates from the [Federal Reserve System (Federal Reserve)]. To that, the [Attorney General's] expert added an *additional* 33 basis points as a further "cushion to absorb the impact of potentially higher business risk and higher interest rates not currently reflected in utility stock prices and forecasted interest rates." Thus, the [Attorney General's] ROE proposal, and the proposals by other non-Company parties, already includes the expectations of higher interest rates undertaken by the [Federal Reserve] and forecasted into the projected test year.

Attorney General's exceptions, p. 7 (footnotes omitted, emphasis in original).

The Attorney General acknowledges that the Commission has held the determination of ROE is not merely a mathematical calculation but notes that her record evidence and briefing support the proposed ROE of 9.50%. She further avers that "the Commission should continue to reduce the ROE to the reasonable levels proposed in this case and previous cases by Staff and intervenors, which are more in line with ROEs of the Company's peer group, nationwide." *Id*., p. 8. Further, she contends that adopting the ALJ's recommendation would penalize the ratepayers by adopting an inflated ROE. *Id*., pp. 8-9.

ABATE excepts to the ALJ's recommendation, arguing that the factors considered by the ALJ in recommending maintaining the 9.9% ROE were addressed in the proceeding by parties and, therefore, "the Commission should reject the [ALJ's] recommendation and instead adopt a lower ROE [that is] 'reasonable and supported by the record.'" ABATE's exceptions, p. 6. Reiterating its record testimony, ABATE contends that interest rates were fully considered by experts and "interest rate concerns do not suggest DTE [Electric's] current ROE is necessary to raise capital through the test year." *Id*., p. 7. ABATE noted that "additional domestic and international developments should have a relatively minimal impact on the utility industry's financial circumstances" and that a lower ROE will not have a negative impact on DTE Electric's financial situation. *Id*., pp. 7-8. Similarly, ABATE states that inflation and a decline in the GDP were considered in its DCF model to support its recommended 9.4% ROE which the ALJ found to be reasonable. *Id*., p. 8 (citing PFD, pp. 427, 454-455). ABATE also reiterates that other parties also considered inflation and GDP in their modeling and, therefore, contends that these factors do not support maintaining the current ROE. ABATE states that it is "imperative that utility rates reflect the relative stability of utility performance, contrasted with the impact of increasing rates on service areas." ABATE's exceptions, p. 9.

In exceptions, the DAAOs state the "contention that, because DTE [Electric] does not acknowledge its legal obligation to maximize profit as a shareholder-owned company in its stated business purpose, the Company is inaccurately presenting its business purpose to the [Commission]." DAAOs' exceptions, p. 7. The DAAOs aver that allowing omission of DTE

Electric's business purpose of maximization of shareholder profits dilutes the accuracy of the record in this case.

The DAAOs also except to the ALJ's recommended ROE of 9.9% and avers that the record clearly supports a much lower ROE. "The DAAO[s] believe that the Commission should reduce ROE as much as necessary to prevent any residential rate increase because of DTE [Electric's] poor performance." *Id*., p. 9. The DAAOs also aver that the Commission need not wait for performance-based metrics to provide accountability for DTE Electric's poor performance and without a lower ROR there will be no incentive for the company to improve. *Id*.

MI-MAUI/Ann Arbor take exception, urging that the Commission consider DTE Electric's performance "and authorize a below-average ROE that is reasonable and supported by the record[,]" which they contend was supported on the record "with unrebutted testimony from many customers regarding the reduced value of DTE [Electric]'s services as a result of DTE [Electric]'s poor reliability, which comport with the Commission's recent findings in other dockets." MI-MAUI/Ann Arbor's exceptions, p. 2. Citing the September 8 order, MI-MAUI/Ann Arbor aver that DTE Electric's below-average performance should be considered in setting the ROE and that the company's "rate of return can be fair and non-confiscatory while also reflecting its sub-par performance compared to peers who made better decisions." MI-MAUI/Ann Arbor's exceptions, p. 3.

In reply, DTE Electric states that it incorporates its exceptions to explain why its ROE should be set at 10.25%. In response to ABATE, the company argues that it is undisputed that inflation is well above 2% and continuing to rise, again citing interest rate increases occurring after the close of the record. DTE Electric's replies to exceptions, p. 43. Replying to the Attorney General and the Staff, DTE Electric avers that their exceptions are not supported by law or evidence on the record. The company further claims that ABATE, the Attorney General, and the Staff all fail to recognize the Commission's guidance that radical reductions to ROE are not realistic or helpful. *Id*., p. 44.

In response to MI-MAUI/Ann Arbor, DTE Electric contends that the "arguments lack merit and relevance to a[n] ROE analysis, and also constitute proposals for subsidies and to deprive the Company of a return 'of' and 'on' its investment in providing service, which are contrary to law . . . ." *Id*. Further, the company contends that MI-MAUI/Ann Arbor's proposals should not be given serious consideration and would be a radical departure "from controlling law by reducing the value of the Company's property by analogy to inapplicable property-tax cases." *Id*. (citing MI-MAUI/Ann Arbor's initial brief, pp. 10-11; MI-MAUI/Ann Arbor's exceptions, p. 3).

In conclusion, DTE Electric contends that the ALJ properly rejected ROE recommendations set forth by ABATE, the Attorney General, and the Staff but "neglected to fully appreciate the effects of recent and continuing changes in economic conditions and other factors that justify increasing DTE Electric's ROE to 10.25%." DTE Electric's replies to exceptions, p. 45.

The Staff replies that, for the first time in exceptions, DTE Electric presents new evidence regarding an additional rate hike "that occurred well after the record of this case was closed." Staff's replies to exceptions, p. 20. While the Staff questions why this information was provided, the Staff notes that it "confidently responds that such a rate hike was included into the initial analysis of Staff and presumably intervenors." *Id*. More specifically, the Staff indicates that the Federal Reserve was clear about rate hikes far in advance and that "[t]he analyst projections on which Staff based its case already accounted for the possibility, and probability, of multiple rate hikes in 2022." *Id*. Therefore, the Staff concludes that the Commission should not be persuaded by the new information and should approve the Staff's proposed 9.60% ROE. *Id*., pp. 20-21.

The Attorney General also replies, arguing that DTE Electric's exceptions reiterate the issues the company raised in testimony and briefing. In addition, the Attorney General characterizes DTE Electric's reference to prior Commission guidance to be "misleading and self-serving" because the Commission's order was referencing significant increases or decreases. Attorney General's replies to exceptions, p. 55. Thus, the Attorney General avers that the company is seeking a greater increase than the reduction sought by the Staff and is similar in adjustment amount to ABATE's and the Attorney General's recommended decrease in ROE. The Attorney General also states that DTE Electric fails to add anything meaningful through its exceptions but that any new information should be disregarded as outside of the record. *Id*., p. 55. Again, the Attorney General indicates that her recommended ROE is supported on the record and is more in line with the company's peer group. Therefore, the Attorney General argues that her recommended ROE of 9.50% should be adopted. *Id*., p. 56.

ABATE replies that DTE Electric's claim of above average risk is not accurate based on the record. ABATE further argues that the company's concerns regarding bond yields, utility risk, and rising inflation "were refuted on the record by numerous parties" and restates the record evidence rebutting DTE Electric's arguments. ABATE's replies to exceptions, p. 11. Overall, ABATE contends that the company's request for a 10.25% ROE is clearly refuted by the record and reiterates its recommendation for a 9.40% ROE. *Id*., p. 12.

MNSC also replies to DTE Electric, noting that the company's attempt at bringing in evidence that was not submitted on the record should be rejected. In addition, MNSC argues that DTE Electric's attempt to support a higher ROE is refuted on the record and that the company's summary of its testimony and modeling "is significantly lopsided and misleading." MNSC's replies to exceptions, p. 59. MNSC reemphasizes that, when removing the improper financial leverage adjustment, DTE Electric's own evidence supports a lower ROE. Finally, MNSC notes its agreement with the parties objecting to the ALJ's determination to maintain the current ROE rather than lowering it based on record evidence, arguing that it "is contrary to the record and imposes additional unreasonable costs on ratepayers." *Id*., p. 61.

To start, the Commission notes its agreement with the ALJ's conclusion that DTE Electric's requested ROE of 10.25% is excessive and unsupported on this record. Further, the Commission adopts the ALJ's findings and conclusions regarding DTE Electric's financial leverage adjustments. The Commission again emphasizes that adjusting for financial risk or applying financial leverage adjustments is not appropriate. While there was some dispute with respect to the terminology used to describe the company's adjustment, the Commission agrees with the ALJ's determination that the parties were referring to the same adjustment. *See*, PFD, p. 446, n. 1289. As quoted by the ALJ at page 447 of the PFD, in the December 9 order, the Commission held that it "'has consistently taken a traditional approach to establishing ROE, focusing on the most commonly used, fundamental approaches to determining a just and reasonable ROE, consistent with the principles of *Hope Natural Gas* and *Bluefield Waterworks*,'" and that the application of ATWACC or other financial leverage adjustments "may excessively inflate ROEs, stock prices, and market-to-book ratios for utilities." December 9 order, p. 91 (citation omitted); *see also*, PFD, p. 446 (citing January 31 order and April 18 order). Therefore, the ALJ's rejection of the company's financial leverage adjustment is well-supported by the record and Commission precedent.

The Commission also finds that the ALJ appropriately noted that the most recent S&P credit report "confirms that DTE [Electric]'s business risk reflects the 'very low risk' of the regulated utility industry . . . ." PFD, pp. 449-450 *see also*, 8 Tr 3065. In general, the company overstates its business risk and the ALJ properly held that "the credit reporting agencies evaluate these types of factors when assessing a company's credit rating, and again, DTE [Electric]'s credit ratings in comparison to the ratings of the proxy sample companies shows that DTE [Electric] does not have a higher business risk than that of its peers." PFD, p. 454.

The Commission also agrees with the ALJ's determination that the ROE's recommended by the Staff, the Attorney General, and ABATE are reasonable and supported in this proceeding. Notwithstanding that determination, the Commission again agrees with the ALJ's rationale that, while the ROEs recommended by the Staff, the Attorney General, and ABATE are reasonable, additional concerns must be given weight in determining the most reasonable and prudent ROE. The ALJ appropriately relied upon the Commission's March 29 order wherein the Commission held "it is not realistic to make a significant change in ROE absent a radical change in the underlying economic conditions." March 29 order, p. 44.[34] In addition, while declining to take official judicial notice of recent increases in interest rates by the Federal Reserve as recommended by DTE Electric, the Commission notes that the financial system is experiencing some turbulence resulting from inflation, supply chain disruptions, and other factors. As noted in the May 8 order:

> The Commission will continue to monitor a variety of market factors in future applications, including market reactions to recent events and measures of volatility and uncertainty, as well as measures of investor confidence, and the utility's risk profile.

May 8 order, p. 177.

Given the uncertainty currently impacting financial markets, the Commission finds that the most prudent course of action is to adopt the ALJ's well-reasoned findings and maintain both the

[34] The Commission notes that, contrary to DTE Electric's exceptions, the March 29 order referenced a significant *change* in ROE, not only a decline as implied by the company. *See*, DTE Electric's exceptions, p. 159.

current ROE and capital structure. The Commission may revisit this determination in future cases as it gains greater insight into the issues currently affecting the financial markets and longer-term macro-economic trends.

Given the above, the Commission finds that the record supports an ROE of 9.90% and the ALJ's findings and recommendations on ROE are adopted.

5. Long-Term Debt Cost Rate

DTE Electric proposed a 3.69% weighted cost of long-term debt. 7 Tr 1284; Exhibit A-14, Schedule D2. Neither the Staff, the Attorney General, nor any other party disputed the company's proposed rates. *See*, 8 Tr 5085, 4818.

The ALJ adopted DTE Electric's proposed weighted cost of long-term debt of 3.69%. PFD, pp. 456-457.

The Commission notes that no party filed exceptions on this issue and finds the ALJ's recommendation to be well supported. Therefore, the weighted cost of long-term debt of 3.69% is adopted.

6. Short-Term Debt Cost Rate

DTE Electric projected a 1.74% cost of short-term debt. 7 Tr 1284; Exhibit A-14, Schedule D2. Neither the Staff, the Attorney General, nor any other party disputed the company's proposed rates. 8 Tr 5085, 4818.

The ALJ adopted DTE Electric's proposed short-term debt cost rate of 1.74%. PFD, pp. 456-457.

The Commission notes that no party filed exceptions on this issue and finds the ALJ's recommendation to be supported. Therefore, the short-term debt cost rate of 1.74% is adopted.

B. Overall Rate of Return

In sum, the ALJ recommended that the Commission adopt DTE Electric's "capital structure and common equity balance, along with a long term debt cost of 3.69%, a short-term debt cost of 1.74%, and a return on equity of 9.9%, resulting in an estimated overall weighted after-tax cost of capital of 5.42% . . . ." PFD, p. 457.

DTE Electric takes exception to the ALJ's recommendation of "a weighted, after-tax overall rate of return of 5.42%" and "requests a weighted, after-tax 5.56% overall rate of return . . . ." DTE Electric's exceptions, p. 158 (citations omitted).

The Attorney General replies to DTE Electric that the Attorney General "continues to recommend an after-tax rate of return of 5.26% and recommends that the Commission reject the Company's requested after-tax rate of return of 5.56%." Attorney General's replies to exceptions, p. 54.

The Commission adopts a 50/50 debt to equity capital structure, a long-term debt cost rate of 3.69%, a short-term debt cost rate of 1.74%, an ROE of 9.90%, and an overall weighted cost of capital of 5.42%, as shown on the table below:

Description	**Amount ($000)**	**Ratio**	**Cost Rate**	**Weighted Cost**
Long-Term Debt	8,410,859	39.55%	3.69%	1.46%
Common Shareholders' Equity	8,426,264	39.62%	9.90%	3.92%
Short-Term Debt	265,492	1.25%	1.74%	0.02%
Investment Tax Credit – Debt	23,688	0.11%	3.69%	0.00%
Investment Tax Credit – Equity	23,688	0.11%	9.90%	0.01%
Deferred Income Taxes (Net)	4,117,952	19.36%	0.00%	0.00%
Total	21,267,943	100.00%		5.42%

VI. ADJUSTED NET OPERATING INCOME

DTE Electric projected an adjusted net operating income (NOI) for the test year of $899,199,000. 7 Tr 2809; Exhibit A-13. The Staff projected an NOI of $988,575,000. 8 Tr 5032; Exhibit S-3, Schedule C-1, line 17.

A. Operating Revenue

1. Sales Forecast

DTE Electric projected 45,047 gigawatt-hours (GWh) in service area sales comprised of 40,438 GWh in bundled sales and 4,609 GWh for customers receiving choice services for the test period. 7 Tr 2630; Exhibit A-15, Schedules E1 and E3.

The Staff testified that DTE Electric's sales forecast was "for the most part" reasonable; however, the Staff's forecast projected higher electric sales for certain customer classes than that of DTE Electric. 8 Tr 5469; Exhibit S-20. The Staff proposed an upward adjustment to the company's sales forecast consisting of a 17 GWh increase to residential bundled customers and a 140 GWh increase to Small C&I customers in the projected test year for a net increase of 157 GWh and a total sales forecast of 45,204 GWh. 8 Tr 5470; Exhibit S-20. The Staff explained the methodology used to develop its forecast and opined that the Staff's forecast took advantage of more recent data, and thus captured a clearer picture of customer electricity usage in the projected test year. 8 Tr 5470-5473.

The Attorney General asserted that DTE Electric's C&I forecasts were conservative, but reasonable. However, the Attorney General argued that the residential customer forecast was "unreasonably low." 8 Tr 4850. The Attorney General asserted that, contrary to DTE Electric's assumptions, residential rates continued to "surge" despite the end to pandemic-related disruptions. 8 Tr 4850. The Attorney General attributed the decline in residential consumption projected by DTE Electric to the "wedge" adjustment made by the company which "utilized data compiled from Community Mobility Reports sourced from Google Maps and other sourced data, to strike a correlation between the movement of individuals from home to business and other activities to and from business locations." 8 Tr 4850-4851 (quoting 7 Tr 2623-2625). The Attorney General asserted that this "wedge" adjustment is a novel approach, but not a proven methodology. 8 Tr 4851. The Attorney General calculated an alternative forecast for residential sales which yielded a 796.4 GWh upward adjustment for a total sales forecast of 45,843.4 GWh. 8 Tr 4852. The Attorney General recommended an incremental sales revenue of $52,652,407. 8 Tr 4853; Exhibit AG-1.38.

In rebuttal, DTE Electric asserted that for an accurate usage comparison, it was appropriate "to only look at the months in which COVID-19 related policies were present . . . ." 7 Tr 2643. DTE Electric stated that a comparison of usage between March through December of the years 2020 and 2021 showed residential use per customer on a downward trajectory of -0.3%, consistent with the company's expectation that residential use would decrease as people returned to the workplace following the pandemic. 7 Tr 2643. DTE Electric supported the use of mobility data as an accurate predictor of sales. DTE Electric stated that "[t]he mobility data was tested in the Company's sales models and proved to be statistically significant." 7 Tr 2646. The company provided industry forecasting groups that recommended using mobility data as a reasonable methodology to address COVID-19 related variances. DTE Electric also provided out-of-sample test statistics that showed the residential model had a 93.7% accuracy without the use of Google Mobility data and a 99.5% model accuracy with Google Mobility data included. 7 Tr 2646.

DTE Electric asserted that the Attorney General's alternative sales forecast was an oversimplification that ignored "trends in appliance saturation, natural efficiencies, economic activity, and . . . trends in customer behavior as a result of the COVID-19 pandemic . . . ." 7 Tr 2648. DTE Electric posited that the Attorney General's methodology for forecasting residential sales has been inconsistent from case to case.

DTE Electric disagrees with the Staff's recommended adjustment to the residential bundled and small C&I bundled customer classes. Specifically, the company took issue with the Staff's assumption of 2% reduction in use-per-customer from energy waste reduction (EWR) programs and the assumption of the reduction in load due to the COVID-19 pandemic. DTE Electric explained that planned EWR savings "are not uniform across customer classes" and are "designed to reduce 2% of total sales, not 2% of each customer classes sales." 7 Tr 2651-2652. DTE Electric explained that the targets of the company's most recent EWR plan are to reduce residential sales by 1.5% and C&I sales by 2.2%. The company recommended the Staff use these projections in its forecasting. For the Staff's COVID-19 adjustment, DTE Electric proposed that the Staff's analysis "be changed to reflect trends in use-per-customer rather than total sales . . . ." 7 Tr 2653. DTE Electric stated that with these adjustments, the Staff's analysis resulted in a load forecast very similar to the company's originally proposed forecast. *See*, 7 Tr 2655-2656; Exhibit A-36, Schedules AA1 and AA2. DTE Electric recommended the Commission adopt the company's forecast.

In its initial brief, DTE Electric reasserted the reasonableness of its original forecast. *See*, DTE Electric's initial brief, pp. 171-175. The Staff found the company's originally filed sales forecast to be reasonable, removing the $19,786,000 sales revenue adjustment that the Staff initially supported. Staff's initial brief, p. 155. The Attorney General argued that "DTE [Electric]'s methodology to forecast sales for the projected test year resulted in significantly understating residential sales" and that the Commission should reject the company's approach of using mobility data in its sales forecasting. Attorney General's initial brief, p. 20. The Attorney General again recommended that the Commission include $52,653,407 of additional revenue to reduce the company's calculated revenue deficiency. *Id*.

The ALJ agreed with the Staff and recommended adopting DTE Electric's original sales forecast. The ALJ concluded that DTE Electric's rebuttal testimony "sufficiently addressed the issues raised to validate the adequacy of the company's forecast." PFD, p. 462.

The Attorney General takes exception to the ALJ's decision to adopt DTE Electric's projected test year sales forecast. The Attorney General remains concerned about DTE Electric's use of a wedge adjustment and Google Maps mobility data to justify a future change in sales. The Attorney General asserts that DTE Electric's forecast "assumes a decline in average customer usage to a level even below 2019 usage, a period which did not include Covid-related effects." Attorney General's exceptions, p. 10. The Attorney General cites to Exhibit AG-1.60 as demonstrating that residential sales rates in 2021 were higher than in 2020. The Attorney General "continues to argue that, as this is the first time that it has been tried in forecasting sales in a rate case, there is no prior track record to show that the use of Google Maps mobility data can be an accurate predictor of future electric sales." Attorney General's exceptions, p. 12. The Attorney General contends that a six-month back-test is insufficient to establish a sustainable trend and the seasonal variability of electric usage. *Id*., pp. 12-13. The Attorney General reasserts that the Commission should adopt her forecast for DTE Electric's test year residential sales and increase the company's projection by 796.4 GWh for a total of 45,843.4 GWh, reducing DTE Electric's revenue deficiency by adding $52,652,407 of additional revenue into this case. *Id*., p. 13.

DTE Electric replies to the Attorney General's exceptions to maintain its position. DTE Electric states that for COVID-19 pandemic related variance, "it is appropriate to look at only the months in which COVID-19 related policies were present." DTE Electric's replies to exceptions, p. 46. DTE Electric also asserts that its use of Google Mobility data to quantify the impacts on residential and C&I consumption by measuring the magnitude of changed behaviors from the COVID-19 pandemic "was tested in the Company's sales models and proved to be statistically significant." *Id*., p. 47. DTE Electric maintains that its proposed methodology for calculating the sales forecast was appropriate and supported by the Staff. *See*, *id*., pp. 48-49. DTE Electric maintains its position that the Commission should adopt DTE Electric's projected test year sales forecast in accordance with the ALJ's decision.

After review of the record and arguments of the parties, the Commission finds the Attorney General's argument and proposed adjustment to DTE Electric's sales forecast to be persuasive. DTE Electric "forecasted a return of a significant volume of sales to commercial and industrial customers during the projected test year and a reduction in residential sales on the assumption that many individuals and families have returned to the work location and resumed pre-covid activities." 8 Tr 4848. However, the Attorney General demonstrated in Tables 5 and 6 of Witness Sebastian Coppola's testimony, that residential sales surged in 2020 and continued to increase in 2021 despite the assumption that individuals and families have returned to work and resumed pre-COVID-19 activities. 8 Tr 4847-4848. It is apparent from the record that higher electricity usage by the average residential customer not only continued but increased based on 2021 actual data. 8 Tr 4847-4848. DTE Electric acknowledges that in 2021, the company "experienced nearly a full year of increased residential usage following the stay-at-home policies set forth in March 2020 by the Governor, as well as businesses encouraging work from home policies." 7 Tr 2643 (footnote omitted). When looking only at months when COVID-19 pandemic related policies were enacted, DTE Electric identified a slight decrease (0.3%) in residential use-per-customer. 7 Tr 2643.

However, DTE Electric's projected 5.5% decline in average residential customer usage for 2022 and a further 1.9% decline for 2023 fail to recognize the present trend of a substantial and sustained increase to residential energy usage. 8 Tr 4849, Table 7.

The Commission agrees with the Attorney General that the use of a "wedge" adjustment, while novel, is unproven. *See*, 8 Tr 4851. The record shows that the company utilized data compiled from Community Mobility Reports sourced from Google Maps and other sourced data to offset the impacts of the COVID-19 pandemic. *See*, 7 Tr 2619-2620, 2623-2625. The Attorney General posits that "[t]his is the first time that [DTE Electric's "wedge" adjustment] has been tried in forecasting sales in a rate case with no prior track record to show that the use of Google Maps mobility data can be an accurate predictor of future electric sales." 8 Tr 4851. As shown in Exhibit AG-1.37, DTE Electric provided six months of back testing for the residential model used in this case. 7 Tr 2646. The Commission acknowledges that the company found Google Mobility data to be statistically significant; however, six-months of out-of-sample testing does not provide the analytical rigor with which the Commission expects companies to project sales multiple years into the future. The Commission finds the strength of the correlation between mobility data and electric consumption to be unpersuasive. As the Attorney General stated, "[n]o direct connection has been presented showing that individuals moving around in a certain geographical area will result in changes in their electricity consumption." 8 Tr 4851.

Finally, the Commission notes that the burden of establishing the reasonableness of its sales forecast rests with DTE Electric. Based on the findings above, particularly when combined with a lack of forecast inputs on the record that further limit the ability for parties to independently verify the company's forecasts, the Commission concludes that DTE Electric has not met its burden of providing the reasonableness of its sales forecast in this case. Accordingly, the Commission adopts the Attorney General's proposed increase of residential sales by 796.4 GWh over the company's projection. By the Staff's calculation, this residential sales forecast results in $127,567,000 of increased revenue and an additional fuel and purchased power expense of $26,816,000 for a net revenue impact of $100,751,000.

2. Residential Income Assistance Credit Count

DTE Electric testified that it had a residential income assistance (RIA) credit count of 61,745 for the projected test year. 5 Tr 817. The Staff discovered a discrepancy in the company's data reporting and customer counts. Through audit, the Staff discovered that the company did not break down data into RIA and low-income assistance (LIA) but produced a combined report. 8 Tr 5274; Exhibit S-9.2. The Staff stated that DTE Electric has a history of over-projecting customer counts for their low-income credits. The Staff proposed to round up for a total monthly enrollment of 65,000 for RIA and LIA as supported by the company's most recent enrollments. 8 Tr 5276. The Staff proposed to retain the LIA enrollments of 32,000 and proposed an RIA projection of 33,000. Further, the Staff stated that:

> if RIA enrollments for the test year exceed Staff's projection, Staff expects DTE [Electric] to continue enrolling all eligible customers in the RIA credit and choosing customers from the RIA credit to receive the LIA until the Company reaches the approved cap on LIA enrollment. The RIA credit is not "funded" at a certain level but utilizes a projection of the customers expected to receive it in the test year for ratemaking purposes. The credit's availability is not contingent on anything but customers meeting the requirements, and the Company should be reminded of that by the Commission once again.

8 Tr 5276.

In its rebuttal testimony, DTE Electric opined that there was no discrepancy in the RIA reporting. The company argued that 64,000 was the current enrollment as of June 2021; the company reported a historical multi-year average for 2020 of approximately 32,687; and the company's proposed rate design forecasts 61,745 average monthly enrollments in the test year.

DTE Electric remarked that "[w]hile the three numbers are different, they represent three different time periods and approaches—they are neither inconsistent nor in conflict." 6 Tr 975.

The Staff maintained its RIA projection and the resulting revenue increase of $2,587,050 in its initial brief. *See*, Staff's initial brief, p. 157. The Staff reasoned that DTE Electric did not establish that it used the correct interpretation of its own data or aligned that data with testimony. In its initial brief, DTE Electric maintained its projected test year RIA enrollment of 61,745. DTE Electric's initial brief, p. 252.

The ALJ found that the Staff's projection and adjustment should be adopted. The ALJ found that DTE Electric did not establish a reason for why its data reporting changed from its last rate case to its current rate case as shown in Exhibit S-9.2. The ALJ also found that "DTE [Electric] provided no explanation for what would be a sudden near doubling of RIA enrollment levels from 2020 to 2021." PFD, p. 465 (footnote omitted). The ALJ noted that DTE Electric "did not ask to have the cap revised on its accounting deferral, which would be surprising if its RIA enrollments on a non-consolidated basis were above that 60,000 cap." *Id*., pp. 465-466 (citing May 8 order, pp. 179-181, establishing a cap of 60,000 based on DTE Electric's enrollment figures in that case). The ALJ stated that instead, DTE Electric's "proposed accounting focused on a combined RIA and LIA tracking and deferral, with a rollover of collected amounts to subsequent year credits." PFD, p. 466 (citing 7 Tr 2769).

The ALJ reviewed the data and specific values presented by the Staff and DTE Electric and found that DTE Electric presented data from a more limited amount of time and did not present a breakdown of LIA and RIA data. The ALJ found that the "Staff's more careful consideration of the historical data inspires more confidence in its projection." PFD, p. 466. The ALJ found that the Staff's projection was supported by a preponderance of the evidence and that it should be adopted by the Commission.

The ALJ observed that the Staff and DTE Electric "appear to have agreed on a modification of the current deferred accounting mechanism for RIA and LIA credits the Commission put in place in Case No. U-20561." PFD, p. 467. DTE Electric initially proposed a mechanism to carry over unspent RIA and LIA credits in one year to offset assistance in the following year. 5 Tr 816. The Staff objected. 8 Tr 5277. In its initial brief, DTE Electric agreed that "it is appropriate to record a regulatory liability for underspending" as proposed by the Staff but proposed that "any underspent amounts be netted against any regulatory assets recorded for overspent amounts such that a cumulative net balance is carried forward for disposition in future rate cases." DTE Electric's initial brief, pp. 251-252. DTE Electric posited that this "would eliminate the need for the Company to file, and the Staff to review, a reconciliation for each two-year period as the Company had initially proposed." *Id*., p. 252 (internal citation omitted). The Staff did not expressly object to DTE Electric's approach, but provided:

> The Commission should, however, be cautious of the goal behind the Company's proposals relating the RIA and LIA projections, since the Company continues to project higher RIA enrollments year over year while actual enrollments decrease, which would make it so there are no additional customers to apply a year's overage to in the next year. (Braunschweig, 8 TR 5276, Line 1-3). Staff's proposed regulatory liability will continue the Commission's work in the last DTE [E]lectric case to financially protect the Company and ratepayers from any difference in projected customer counts. (Braunschweig, 8 TR 5277, Line 10-17).

Staff's initial brief, p. 226.

The ALJ recommended that "the Commission permit the deferred accounting balances to be presented and rate treatment determined in rate cases rather than through biennial reconciliation." PFD, p. 467.

DTE Electric objects to the ALJ's decision to adopt the Staff's proposed RIA customer count. DTE Electric maintains that enrollments will remain at or above the 60,000 level. DTE Electric requests that the Commission "adopt the Company's forecast of 61,745 RIA enrollments and retain the current practice of pairing LIA enrollments with LSP [Low Income Self Sufficiency Plan], along with the Company's discretion to enroll non-LSP households when space is available." DTE Electric's exceptions, p. 172 (internal citation omitted).

DTE Electric also disagrees with the ALJ's decision to adopt the Staff's proposed $2,587,050 increase to present sales revenue based on the discrepancy regarding RIA enrollments between the company's direct testimony, audit responses, and proposed rate design. The company maintains that these historical and projected enrollments reflect three different time periods and approaches and thus, there is "no inconsistency or conflict in the three numbers." *Id*., p. 172. DTE Electric maintains that its "proposal of 61,745 monthly average RIA enrollments is a reasonable forecast given historical test year information, and is corroborated with 2021 and partial 2022 data (Willis, [6 Tr] 975-976)." *Id*. DTE Electric recommends that the Commission reject the Staff's proposal and instead adopt the company's proposed forecast of 61,745 RIA credits and the resulting revenues.

No replies to exceptions were filed on this issue.

After review of the record and arguments of the parties, the Commission finds the ALJ's recommendations on these issues to be well-reasoned and supported by the record. Accordingly, the Commission adopts the ALJ's findings and conclusions. The Commission adopts the Staff's RIA projection of 65,000 RIA and LIA credits and resulting revenue increase of $2,587,050, in accordance with the ALJ's decision. The Commission permits the deferred accounting treatment of RIA credits to be presented in rate cases in accordance with its decision in DTE Electric's last general electric rate case.

B. Fuel and Purchased Power Expense

DTE Electric projected a fuel and purchased power revenue/expense of $1,359,739,806. Exhibit A-13, Schedule C4, line 28. The Staff recommended a base fuel and purchased power revenue/expense of $1,360,015,000. Exhibit S-6, Schedule F1.1. The discrepancy between DTE Electric's and the Staff's projection was due to a correction the Staff made to the R10 Voltage Level Service Adder in Test Year Power Supply Costs. DTE Electric projected an expense of $579,773. Exhibit A-13, Schedule C4, line 21. The Staff proposed an adjusted amount of $854,484 for a difference of $274,711. Exhibit S-3, Schedule C4, line 21. The parties maintained their positions in their initial and reply briefs. *See*, Staff's initial brief, pp. 158-159, Appendix C; DTE Electric's initial brief, p. 176; DTE Electric's reply brief, p. 136. The ALJ mistakenly concluded that the Staff and DTE Electric agreed on a fuel and purchased power expense. PFD, p. 468. However, the ALJ adopted the Staff's recommended increase in fuel and purchased power revenue in Appendix C to the PFD for a final fuel and purchase power revenue/expense of $1,360,015,000.

No exceptions were filed on the issue.

The Commission finds the Staff's proposed adjustment to be reasonable and adopts the ALJ's recommendation as it appears in Appendix C to the PFD. Additionally, this order adopts the Attorney General's sales forecast adjustment, which increases fuel and purchased power expense by $26,816,000, making the grand total $1,386,830,000.

C. Operations and Maintenance Expense

1. Inflation

DTE Electric used composite inflation rates of 3.1% for 2021, 2.9% for 2022, and 2.42% for 2023. The composite inflation rate is based on its internal 3% projected increase in labor costs and the forecasted Consumer Price Index (CPI), CPI-Urban, non-labor index. 7 Tr 2710; Exhibit A-13, Schedule C5.15.

Only ABATE raised an objection to the company's use of this inflation rate. ABATE posited that:

> [t]here are many moving pieces with respect to the Company's labor expense. This includes changes in the number of new employees, which would potentially be brought on at lower wages than the average wage of existing employees, and recognizing that certain employees may retire over time and be replaced by new, less experienced, employees at lower wages. Finally, DTE [Electric]'s wage escalation assumption does not consider that certain escalations may be managed such that the expense may not increase at the overall cost of inflation. This could include certain employee wage changes. Mr. Cooper neglects to consider how these variables might impact the actual wage escalation, and instead relies on a limited amount of historical wage changes.

8 Tr 3012. ABATE recommended that the wage escalation factor be based on independent economists' estimates for future inflation rates, consistent with DTE Electric's use of CPI-Urban inflation rates for non-labor O&M expenses. ABATE noted that although inflation rates have increased for 2022 and 2023, "DTE [Electric] has successfully managed its costs such that they have not increased at the same rate as inflation for many years, and is expected to continue to do so in the future." 8 Tr 3014.

In rebuttal testimony, DTE Electric contended that ABATE's position:

> largely ignores the impact of pay progressions as provided under the Company's Collective Bargaining Agreements for represented employees and advancements in pay scale and promotions for the Company's non-represented employees. Indeed, over the last three years the Company's average increase in employee wages has increased by 3.1% during which the annual pay adjustment for each year was 3.0%.

7 Tr 1885. DTE Electric also testified that the company has not been able to fully offset inflation in recent years. *See*, 7 Tr 2389-2390.

In its initial brief, ABATE asserted that the Commission has historically rejected the use of a composite labor and CPI inflation rate. ABATE's initial brief, pp. 52-53 (citing December 22 order, pp. 250-251). ABATE also argued that the company's proposal is inconsistent with the historical decline of DTE Electric's O&M expenses by 0.73% from 2011 to 2022. ABATE's initial brief, p. 54.

The ALJ found that it is "acceptable under the current circumstances to utilize DTE [Electric's] inflation rates as a general matter." PFD, p. 470. The ALJ noted that "[t]here are exceptions, however, to follow the Commission's prior determinations regarding expenses such as health care that are influenced by a multitude of factors." *Id*. Additionally, "since the company's approach to combating inflationary pressure may lead to overcapitalization of costs that should be expensed" the ALJ called for "an evaluation of the company's capitalization policies . . . ." as outlined above. *Id*.

ABATE takes exception to the ALJ's decision to adopt DTE Electric's labor inflation rates. ABATE argues that the Commission has consistently rejected the use of a composite inflation rate. ABATE contends that DTE Electric did not consider personnel changes that would reduce labor costs and "neglected to incorporate future escalator projections from independent economists, which provide an unbiased and disinterested resource for projecting future expenses." ABATE's exceptions, p. 9. ABATE asserts that DTE Electric's proposed labor inflation rates do not reflect the company's "indication that it strives to identify and execute sustainable productivity improvements and leverage new technology to help control its cost structure over the long term, and that it has been able to offset inflation in prior years" as is reflected in the company's declining O&M costs. *Id*. ABATE recommends that the Commission decline the ALJ's recommendation and adopt the O&M labor inflation figures it provided in its direct case.

DTE Electric replies to ABATE's exceptions that, although the company has been able to manage its O&M expenses in a way that offsets inflation, it "cannot continually offset wage growth . . . by managing non-labor O&M at levels much lower than the rate of inflation." DTE Electric's replies to exceptions, p. 50. DTE Electric also asserts "that over the last three years, the Company's average increase in employee wages has increased by 3.1%, during which the annual pay adjustment for each year was 3.0%." *Id*. The company avers that this actual experience demonstrates that its 3.0% inflation projection for labor costs is reasonable. DTE Electric concludes that its "proposed inflation rates are fully justified and should be adopted" in accordance with the ALJ's decision. *Id*., p. 51.

The Commission finds the ALJ's decision to be well-reasoned and supported by the record. The Commission adopts the ALJ's decision as it relates to labor and non-labor inflation rates.

2. Generation Expense

DTE Electric projected a test year steam power generation O&M expense of approximately $223,769,000. Exhibit A-13, Schedule C5.1, line 21. The Staff recommended a reduction of $4,581,000. 8 Tr 5480; Exhibit S-22. The Staff explained that it "does not find it reasonable for DTE Electric to subtract the 2020 historical O&M expenses for the retiring generating plants after it adjusted for inflation. By doing so, the Company has calculated interest on amounts that are not going to be incurred in the projected test period." 8 Tr 5480. DTE Electric did not provide rebuttal testimony on this issue. The parties maintained their positions in briefs and the issue was not addressed in reply briefs. The ALJ concluded that the Staff's $4,581,000 adjustment should be adopted. PFD, p. 471.

No exceptions were filed on this issue.

The Commission finds the ALJ's decision to be well reasoned and thus, adopts the ALJ's recommendation and the Staff's proposed disallowance.

3. Distribution Expense

a. Restoration Operations and Maintenance

DTE Electric projected a restoration O&M expense of $107,627,000 inclusive of inflation. Exhibit A-13, Schedule C5.6, p. 2. The Staff recommended an increase in the distribution O&M expense of $14,777,000, for a total projected test year O&M restoration spend of $122,404,000. 8 Tr 5418; Exhibit S-15.2. The Staff recommended an increase in the restoration O&M expense to reflect the use of a five-year rather than a three-year average to project the storm restoration expense, consistent with its position that a five-year historical average should be maintained for emergent replacements capital spend.

In rebuttal testimony, DTE Electric reiterated the company's view that a three-year average "better reflects the current conditions that the Company is experiencing." 4 Tr 505. However, DTE Electric stated that if the Commission does adopt the change from the three-year average inflation adjusted historical average for emergent capital, then the same method should apply to O&M restoration costs and the Staff's proposed increase should be granted.

In its initial brief, the Staff maintained that a five-year average is appropriate for the reasons discussed under the emergent replacements capital program above. The Staff restated that "weather remains variable, and the Commission has consistently adopted a 5-year average to project unplanned spending." Staff's initial brief, p. 165. DTE Electric relied on its principal argument in its initial and reply briefs. *See*, DTE Electric's initial brief, p. 182; DTE Electric's reply brief, p. 140.

The ALJ concluded that a five-year average should be used under the same reasoning as the company's emergent replacements capital program. PFD, p. 471.

The Staff filed exceptions to the ALJ's decision to maintain that the Commission should adopt its proposed O&M increase of $14,777,000 for storm restoration. Staff's exceptions, p. 11. The Staff interpreted Appendix C, line 10, column (g) of the ALJ's decision to indicate that the ALJ adopted the Staff's position from its initial brief. The Staff asks the Commission to explicitly confirm its support for the Staff's position and establish that using a five-year average to project the storm restoration expense is appropriate.

DTE Electric takes exception to the ALJ's decision to adopt the Staff's proposed five-year average for O&M restoration costs. As discussed above regarding emergent capital expenditures, the company maintains that a three-year average "better reflects current conditions." DTE Electric's exceptions, p. 174. The company notes that if the Commission adopts a five-year average for emergent capital, then the same method should apply to O&M restoration, resulting in a $14.777 million increase to the storm restoration expense.

The Attorney General replies to DTE Electric's exceptions to assert that the Commission should adopt the Attorney General's and ALJ's recommendation to use a five-year average in calculating storm restoration O&M expense. Attorney General's replies to exceptions, p. 57.

The Commission finds the ALJ's decision to be well reasoned and supported by the record. The Commission adopts the ALJ's decision in congruity with its decision on emergent replacement capital spending in Rate Base, Distribution System, Base Capital, Emergent Replacements, above. *See*, PFD, pp. 145-153. The Commission clarifies that it adopts both the Staff's use of a five-year average to project the storm restoration expense as well as the $14,777,000 increase proposed by the Staff in its initial brief.

b. Tree Trimming

DTE Electric testified that the company spent $151.1 million on its tree trimming program in 2020, $16.5 million more than the $134.6 million ($91.3 million for base tree trim funding plus $43.3 million for surge deferral funding) of funding approved in Case Nos. U-20162 and U-20561. 7 Tr 2282. The company stated that it does not expect to meet its 2021 tree trimming target due to unprecedented summer storms and unfavorable fall weather. 7 Tr 2289. DTE Electric explained its five-year tree trimming cycle and surge program including the NPV analysis performed by the company. The company also noted that "[r]eactive trouble activities in support of outages and wire downs are included in the Surge funding. This includes reactive spot trimming which has increased significantly to address circuits with high volumes of customer reliability issues." 7 Tr 2314. To meet its five-year cycle goals and complete the surge program in 2024, DTE Electric is requesting $103.9 million base O&M for tree trimming and $67.0 million in surge funding for 2023 and $52.7 million in surge funding for 2024. 7 Tr 2318-2319; Exhibit A-13, Schedule C5.6.1. DTE Electric stated that the company expects to recover $407.1 million through base rates from 2021 to 2024 and intends to recover deferred surge program costs through securitization. 7 Tr 2322; Exhibit A-22, Schedule L1.

The ALJ noted that "[n]o party disputed DTE [Electric]'s tree trimming expense or its surge program spending plan." PFD, p. 473. The Commission approves DTE Electric's $103.9 million base O&M for tree trimming and the company's requested $67.0 million and $52.7 million in surge funding for the years 2023 and 2024, respectively. The only issues raised about DTE Electric's tree trimming were the company's calculated savings from the tree trimming surge program, addressed below, and the interest rate for the accumulated regulatory asset, addressed in the Other Expense section of this order.

The Attorney General disputed the company's estimated tree trimming surge cost savings for both capital and O&M. The Attorney General provided Exhibit AG-1.42, which demonstrates that "O&M cost savings of $5.7 million can be achieved as a result of the spending on the surge program and related programs." 8 Tr 4858. The Attorney General recommended the Commission remove $5.7 million in cost savings from the company's forecasted O&M expense to account for these savings.

In rebuttal testimony, DTE Electric agreed that savings from the tree trimming surge should be reflected in the company's O&M expense. 7 Tr 2334. The company testified that $1.5 million of the savings were already included in the total surge cost projection in Exhibit A-22. The company thus proposed reducing the O&M expense by $4.2 million to account for the remaining savings, which it stated are "typically included in the O&M calculation in Exhibit A-13, Schedule C5.6, but were inadvertently omitted." 7 Tr 2334.

In its initial brief, DTE Electric included a $4.2 million reduction to its surge-related O&M savings estimate. DTE Electric's initial brief, p. 187. In its reply brief, the Attorney General stated that "because [Exhibit A-22] is an informational exhibit and not part of the O&M exhibits that roll up to the O&M summary [Exhibit A-13,] Schedule C5, which has amounts included in the rate case revenue requirement," the $1.5 million in savings DTE Electric claimed was included has yet to be omitted from the company's forecasted O&M expense, and thus the Attorney General continued to recommend that the Commission remove $5.7 million in cost savings. Attorney General's reply brief, p. 32.

After reviewing Exhibit A-22, the ALJ concluded that it is reasonable to accept DTE Electric's explanation and that DTE Electric's $4.2 million credit is sufficient. PFD, p. 474. No exceptions were filed on the issue of the company's projected tree trimming expense or its surge program spending plan. Exceptions and replies to exceptions on the return on the company's tree trimming regulatory asset are discussed below.

The Commission finds the ALJ's decision to be well reasoned and supported by the record. The Commission adopts the ALJ's finding that DTE Electric has sufficiently offset its O&M expense by its tree-trim surge savings cost estimate.

MNSC argued that DTE Electric should consider a variable-length tree trimming cycle. *See*, 8 Tr 4030. DTE Electric objected to this proposal. *See*, DTE Electric's reply brief, p. 141. This issue is discussed below.

c. Community Lighting

DTE Electric projected a $4,116,000 O&M expense for its community lighting program. Exhibit A-13, Schedule C5.6, line 22.

i. Staff Adjustments

The Staff requested actual 2021 expenditures which it compared to DTE Electric's forecast. The Staff proposed a $241,596 reduction to DTE Electric's community lighting O&M expense projection based on the ratio of the company's 2021 actual spending to projected spending. 8 Tr 5172-5173; Exhibits S-7.1, S-7.3.

In its rebuttal testimony, DTE Electric objected to the reduction, stating that the company's test year projection was based on 2020 O&M adjusted only for inflation. 7 Tr 1775-1776. Further, DTE Electric asserted that the company's O&M actuals were "far in excess" of the amount the company seeks to recover in the instant rate case. 7 Tr 1776.

In its initial brief, the Staff reasserted the reasonableness of its proposed reduction. The Staff reasoned that if DTE Electric is not expected to spend its full projected capital costs for the bridge period and test year, "it is also reasonable to assume the associated O&M spending will also be reduced." Staff's initial brief, p. 166. MI-MAUI/Ann Arbor endorsed the Staff's recommendation in their initial brief. MI-MAUI/Ann Arbor's initial brief, p. 60, n. 20. In its initial and reply briefs, DTE Electric maintained its position and contended that "there is no basis for Staff's indicated assumptions that capital expenditures and O&M costs have such a relationship." DTE Electric's reply brief, p. 142. DTE Electric stated that the Staff's assumptions are "entirely speculative and unsupported, and therefore cannot support a decision." *Id*.

The ALJ found that the Staff's recommendation was reasonable and should be adopted. The ALJ reasoned that because DTE Electric "was projecting it would spend both capital and O&M, it is appropriate to reduce the O&M expense allowance along with the capital expense projection." PFD, p. 476.

DTE Electric takes exception and reasserts that there is "no basis for Staff's indicated assumption(s) that capital expenditures and O&M costs have some relationship(s) such that underspending in capital would somehow correspond to underspending by the same percentage in O&M." DTE Electric's exceptions, p. 178 (internal citation omitted). DTE Electric requests that the Commission reject the ALJ's decision.

The Staff filed exceptions for O&M along with its exceptions on capital disallowances for community lighting "as reductions in capital costs should also be accompanied by reductions in associated in O&M." Staff's exceptions, pp. 8-9. As the ALJ found that the Staff's capital disallowance for community lighting was reasonable, the "Staff recommends the Commission also adopt Staff's recommended O&M disallowances that accompany the capital disallowances." *Id*., p. 9.

DTE Electric filed replies to the Staff's exception to state that the company disagrees on the basis that: (1) capital expenditures and O&M costs are two different things, (2) the Staff did not support its position, and (3) the company fully supported its O&M recovery. DTE Electric's replies to exceptions, p. 52.

After review of the record and arguments of the parties, the Commission finds the ALJ's recommendations on these issues to be well reasoned and supported by the record. Accordingly, the Commission adopts the ALJ's findings and conclusions. The Commission adopts the proposed $241,596 reduction to DTE Electric's community lighting O&M expense projection.

ii. Light-Emitting Diode Lamp Washing

DTE Electric proposed $270,322 in spending on LED streetlamp washing in the test year. 8 Tr 3473. MI-MAUI/Ann Arbor recommended that the Commission reduce the cost recovery for the LED washing program by 50% to $135,000. 8 Tr 3474. MI-MAUI/Ann Arbor argued that DTE Electric's projection is excessively high due to DTE Electric washing the streetlamps too frequently. *See*, 8 Tr 3472-3473. MI-MAUI/Ann Arbor cited studies that LED streetlamps only need to be washed every 10 years, while DTE Electric washes them every five years. *Id.*; MI-MAUI/Ann Arbor's initial brief, p. 66; Exhibit MAUI-22.

DTE Electric provided rebuttal testimony that the studies cited do not include the specific model of LED luminaire used by DTE Electric. 7 Tr 1762. DTE Electric testified that "[h]eavy truck traffic and salt spray are unique to a Midwest state such as Michigan, and the tri-counties (Macomb, Wayne, and Oakland) in particular." 7 Tr 1762-1763. The company asserted that it has "studied the impacts of dirt depreciation unique to the roadway conditions [its] luminaires are intended to operate, the results of which indicated that washing on a 5-year cycle maintained a safe driving environment." 7 Tr 1763.

In their initial brief, MI-MAUI/Ann Arbor argued that if the LED streetlamps installed by DTE Electric need more frequent cleaning, the company should not have purchased that model and “customers should not bear the costs associated with an imprudent choice.” MI-MAUI/Ann Arbor’s initial brief, p. 66. In their reply brief, MI-MAUI/Ann Arbor emphasized the importance of using a peer-reviewed study as opposed to an internal study to support the company’s contention. *See*, MI-MAUI/Ann Arbor’s reply brief, pp. 14-16.

The ALJ found MI-MAUI/Ann Arbor’s arguments persuasive that DTE Electric failed to produce its own study when requested in discovery and has thus failed to establish that its LED streetlamp washing program is reasonable and prudent. PFD, p. 478. The ALJ recommended that the Commission adopt MI-MAUI/Ann Arbor’s proposed reduction to cost recovery for the LED washing program of 50% resulting in a $135,000 expense.

MI-MAUI/Ann Arbor take exception to the ALJ’s decision on the basis that it failed to address the parties’ recommendation “that the Commission ensure that no customer faces a rate increase greater than 15% and that the median customer incur an increase no greater than 10%.” MI-MAUI/Ann Arbor’s exceptions, p. 22. MI-MAUI/Ann Arbor “make this recommendation in light of the fact that DTE [Electric]’s proposed streetlighting tariff will result in a median increase of 24.2% in streetlighting bills, which will cause rate shock.” *Id*. MI-MAUI/Ann Arbor recommend that the Commission address this issue in its final order.

DTE Electric takes exception to the ALJ’s decision and asserts that its LED streetlamp washing practices are reasonable and prudent. The company repeats its arguments from its direct testimony that the studies presented by MI-MAUI/Ann Arbor did not include the luminaire type predominantly used by DTE Electric and that “[h]eavy truck traffic and salt spray are unique to a Midwest state such as Michigan, and particularly to the Company’s service territory.” DTE Electric’s exceptions, p. 179 (citing 7 Tr 1762-1763). DTE Electric argues that the ALJ’s decision is unfounded and should be rejected.

MI-MAUI/Ann Arbor reply to DTE Electric's exceptions to maintain their position and support the ALJ's finding that DTE Electric's refusal to produce its own report on LED lamp washing was "unwarranted." MI-MAUI/Ann Arbor's replies to exceptions, p. 4; *see also*, PFD, p. 478. MI-MAUI/Ann Arbor assert that "DTE [Electric] failed to provide any defense or good faith explanation for why it had withheld the document, nor did the Company make any good faith argument that the applicable discovery rules should not apply." MI-MAUI/Ann Arbor's replies to exceptions, p. 5.

The Attorney General also replies to DTE Electric's exceptions to restate her position in support of the ALJ's decision to adopt the position of the Staff and MI-MAUI/Ann Arbor. Attorney General's replies to exceptions, p. 58.

The Commission finds the ALJ's recommendation on these issues to be well reasoned and supported by the record. While DTE Electric's arguments on the reasons why the unique characteristics of its service territory may warrant a different approach than that recommended in the study relied upon by MI-MAUI/Ann Arbor may have merit, its refusal to provide its own study supporting this assertion in discovery fatally undermines the company's position. The Commission reminds DTE Electric that it bears the burden of demonstrating the reasonableness and prudence of its spending; in the absence of this study, the company clearly fails to meet this standard. Accordingly, the Commission adopts the ALJ's findings and conclusions. Specifically, the Commission adopts the proposed $135,322 reduction to DTE Electric's LED lamp washing expense projection for a resulting expense of $135,000.

d. Customer Service Normalizing Adjustment

In response to a discovery request, DTE Electric explained that it made a $1,213,000 adjustment to the O&M expense level to reflect the effects of a temporary transfer of

35 employees from distribution operations to customer service operations. 8 Tr 4856; Exhibit AG-1.41. The Attorney General objected to the normalizing adjustment to the 2020 O&M expense levels for distribution operations as no normalizing adjustment was made to the customer service O&M expenses. *See*, 8 Tr 4856-4857. The Attorney General concluded that this adjustment was "not appropriate and should be removed." 8 Tr 4857. DTE Electric did not address the issue in rebuttal testimony or in briefing. The ALJ concluded that the Attorney General's adjustment should be adopted. PFD, p. 479.

No exceptions were filed on this issue.

The Commission finds it appropriate to adopt the Attorney General's recommended $1,213,000 adjustment.

4. Customer Service

DTE Electric testified that the company spent $110,655,00 on customer service O&M in the historical test period and forecasted $133,570,000 in customer service O&M expenses for the projected test year. 7 Tr 1616; Exhibit A-13, Schedule C5.7.

a. Customer Service Representatives

DTE Electric testified that the historical test year expenses were increased by $1,787,000 for one-time pandemic-related savings from delayed hiring. 7 Tr 1625; Exhibit A-13, Schedule C5.7. DTE Electric also specified that an additional $7,920,000 adjustment was made in the test year for a 120 headcount increase for CSR personnel and associated costs. DTE Electric testified that the company's target is to answer 60% of customer calls within 90 seconds based on current staffing levels. 7 Tr 1638. DTE Electric stated that, according to J.D. Power, the best practice call service levels should be 80% of customer calls answered in 30-60 seconds. 7 Tr 1638. DTE Electric broke down the $7.9 million adjustment into "$2.3 million for Time of Use (TOU) Full

Implementation ongoing costs that include billing exceptions $1.3 [million], digital experience $0.5 [million] and AMI support $0.5 [million]." 7 Tr 1638.

The Attorney General recommended the Commission remove the total $9,707,000 ($1,787,000 for one-time pandemic-related savings from delayed hiring and $7,920,000 increase for CSRs) from the company's proposed O&M expense. The Attorney General testified that there was little delay in hiring of CSRs as DTE Electric hired 69 full-time employees between 2019 and 2020. 8 Tr 4860; Exhibit AG-1.43. The Attorney General asserted that DTE Electric's request for 120 CSRs is "troubling" as the company's employee count data "shows further increases in customer service employees in 2021 and 2022 before a levelling at 847 in 2023." 8 Tr 4860. The Attorney General noted that DTE Electric "has spent hundreds of millions of dollars on digital technology, customer system upgrades, and customer service automation systems to supposedly reduce the number of calls that need to be handled by CSRs." 8 Tr 4860. The Attorney General posited that DTE Electric's request for an additional $9.7 million of O&M expense to hire more CSRs is counter to the company's proposed capital spending initiatives and the company "must either reassess its investment in digital and customer self-help systems and avoid those capital expenditures or withdraw its request to add more CSRs." 8 Tr 4860. In addition to the $9.7 million reduction to the company's proposed O&M expense, the Attorney General recommended that the Commission "direct the Company to provide a cost/benefit analysis in the next rate case that shows the capital expenditures made to date and proposed in the future for customer digital IT systems is reducing operation costs, particularly in call handling . . . ." 8 Tr 4861.

In rebuttal testimony, DTE Electric argued that digital enhancements to customer service are "projected to reduce the volume for the type of calls that customers can perform without the assistance of a CSR and what remains are the type of calls that are more complex and may require additional handling time and knowledgeable CSRs to respond and resolve customer's needs." 7 Tr 1642. DTE Electric also distinguished that:

> [t]he breakdown of the $9.7 million includes $1.8 million driven by lag hire in 2020 due to the pandemic, $2.3 million associated with ongoing O&M for Time of Use ("TOU") implementation, and $5.6 million for the incremental 120 CSRs. The $1.8 million for lag hire and $2.3 million for TOU are unrelated to the request for additional CSRs.

7 Tr 1642-1643. In response to the Attorney General's claim that there was not a delay in hiring during the pandemic, DTE Electric stated that "the change in headcount was actually driven by incremental CSRs hired for a new call center in Cass City during 2020 rather than an actual headcount increase for non-CSRs." 7 Tr 1643. The company supported a $0.95 million reduction to overall O&M to capture call volume reduction savings associated with digital investments. 7 Tr 1644. The parties maintained their positions in briefs.

The ALJ found that DTE Electric "has failed to justify its projected increase in the O&M expense allowance for the Customer Service group above an inflation-adjusted 2020 level that excludes DTE [Electric]'s 'hiring lag' adjustment." PFD, p. 483. The ALJ found that DTE Electric made no effort in its direct case to justify its increased expenses based on historical data. Specifically, the ALJ noted that DTE Electric did not present an evaluation of its projected call volumes or call handling times considering its IT capital investments in digital technology and digital customer service. The ALJ stated that DTE Electric "did not explain the basis of [its] estimated reduction in calls or how it relates to the claimed additional staffing needs." *Id.*, p. 484. The ALJ noted that DTE Electric did not establish the level of spending necessary to meet goals of reduced customer wait times and increased customer satisfaction.

The ALJ also found that DTE Electric "has been selective in the adjustments it has chosen to make to the 2020 test year." *Id*. The ALJ noted the information that the company only disclosed in rebuttal, including that the company "has in 2020 hired an additional 233 CSRs" and that this "expansion was 'offset' by reduced vendor spending of $3 million . . . ." *Id*., p. 485. The ALJ questioned the projected expenses given that the company claims to have offset the hiring of 233 CSRs with $3 million while it projects $5.6 million in expenses for an additional 120 CSRs. The ALJ stated that:

> DTE [Electric] has the obligation to support its expense projections and it has failed to do so. Because DTE [Electric] has not justified the reasonableness of its overall level of customer service expenditures, it has not justified the addition of the 120 CSRs or the portion of the additional $9.7 million it ascribes to a "hiring lag" or to TOU costs.

Id. While TOU costs are addressed elsewhere in the ALJ's decision, the ALJ found here that DTE Electric did not establish the basis for its additional test year expense of $2.3 million.

DTE Electric takes exception, incorporating the arguments from its direct testimony and asserting that the company has met its evidentiary burden. DTE Electric objects to the Attorney General's proposed headcount cost disallowance. However, the company agrees to a $0.95 million reduction to its overall O&M request to capture call volume savings attributable to new technologies. DTE Electric's exceptions, p. 182.

The Staff replies to DTE Electric's exceptions to assert that the ALJ correctly disallowed $9.7 million in O&M expense as requested by the Attorney General for 120 additional CSRs. The Staff recommends the Commission approve the Attorney General's proposed disallowance, in accordance with the ALJ's decision. Staff's replies to exceptions, p. 19.

The Attorney General also replies to DTE Electric's exceptions to posit that "[t]he ALJ's analysis and discussion on this topic is thorough, completely refutes DTE [Electric]'s argument, and does a good job of laying out the shortcomings in the company's evidentiary presentation." Attorney General's replies to exceptions, p. 59. The Attorney General concludes that the Commission should adopt the Attorney General's position and ALJ's decision to disallow costs related to the hiring of additional CSRs.

After a review of the record, the Commission finds the ALJ's decision to be well reasoned and adequately supported. The Commission adopts the ALJ's decision and the Attorney General's related reduction in O&M expense for CSRs.

b. Merchant Fees

DTE Electric forecasted $20,522,000 of merchant fees in the test year. 7 Tr 2495; Exhibit A-13, Schedule C5.7.1. Merchant fees are the transactional costs associated with processing a debit or credit card payment. DTE Electric asserted that the company "continues to restrict the use of credit and debit cards for business customers" through two mitigation policies approved in prior rate cases. 7 Tr 2495.

The Staff testified that DTE Electric's request was a 54% increase over the three-year average of $13.3 million. 8 Tr 5265. The Staff proposed a disallowance of $2,972,836 for the projected test year based on a three-year average percent increase in credit/debit card use based on third-party vendor invoicing and projection of the test year that the Staff asserted is "more conservative and accurate." 8 Tr 5265-5266. The Staff recommended an expense of $17,549,164 for the test year. 8 Tr 5266.

The Attorney General projected residential merchant fees of $10.9 million for the test year. 8 Tr 4866; Exhibit AG-1.45. The Attorney General arrived at this projection using a five-year historical average from 2016 to 2021 and projecting that 44.4% of the company's customers would pay bills using a credit or debit card. 8 Tr 4866. The Attorney General recommended removing $8.2 million from the company's projected test year O&M expense. 8 Tr 4866.

In rebuttal, DTE Electric testified that the Attorney General "incorrectly assumes that the growth in the Company's merchant fee forecast is directly related to the number of customers paying their bill with a credit and/or debit card." 7 Tr 2527. DTE Electric stated that "the volume of payment transactions and the rate of fees (per transaction) charged by the various credit and debit card companies and banking institutions are primarily driving the increase in merchant fees." 7 Tr 2527. DTE Electric posited that:

> [i]t is not feasible to forecast which type of card each customer will use or how often each type will be used as a form of payment in any given year. Therefore, the merchant fee forecast is derived by the growth in actual transaction fees assessed to DTE Electric on an annual basis.

7 Tr 2527-2528.

In its initial brief, DTE Electric did not oppose the Staff's proposed disallowance and recommended that the Commission adopt the Staff's projected merchant fee expense of $17,549,164 for the test year. DTE Electric's initial brief, p. 197. The Staff and the Attorney General both reiterated their above arguments in their initial briefs. Staff's initial brief, p. 173; Attorney General's initial brief, p. 29. In her reply brief, the Attorney General argued that neither DTE Electric's direct nor rebuttal testimony is supported by evidence of transaction volumes or rates charged by credit card companies. Attorney General's reply brief, p. 34. The Attorney General asserted that her forecasting methodology was more reasonable because it "takes into account the fact that as the total number of participating customers increases there is a saturation stage that is reached, whereby the number of remaining customers who can participate to fuel growth of credit card transactions diminishes." *Id.*, p. 35. The Staff did not address this issue in its reply brief. DTE Electric's reply brief restates its outlined position. DTE Electric's reply brief, pp. 146-147.

The ALJ agreed with the Staff's position, which was supported by DTE Electric in briefing. The ALJ recommended that the Commission adopt the Staff's proposed $2.9 million disallowance and set merchant fee expenses at $17,549,164, for the test year. PFD, p. 487.

In exceptions, the Attorney General asserts that the ALJ erred in recommending the Commission adopt the Staff's and DTE Electric's position and setting the merchant fee O&M expense at $17,549,000 for the test year. The Attorney General argues that the ALJ failed to explain why the Attorney General's methodology, which she asserts is "more sound," should not be adopted. Attorney General's exceptions, p. 14. The Attorney General continues to recommend removing $8.2 million from the utility's projected O&M expense for merchant fees.

DTE Electric replies to the Attorney General's exceptions, stating that the Attorney General's proposal "should be rejected because it only accounts for annual growth from 2020 to 2021. DTE Electric used a three-year historical growth rate to forecast the projected test years to avoid anomalies from any specific year (such as 2020, which was impacted by the pandemic)." DTE Electric's replies to exceptions, p. 53. DTE Electric restates its testimony in part and maintains its recommendation that the Commission adopt the merchant fees agreed upon by the company and the Staff. *See*, *id*., p. 54.

The Commission finds the Attorney General's arguments to be persuasive. Exhibit A-13, Schedule C5.7.1 shows an approximate $9,674,000 increase in residential credit and debit card fees between the adjusted historical test year and projected test year totaling a projected residential merchant fee expense of $19.111 million in the test year. *See also*, 8 Tr 4864. DTE Electric "assumes that merchant fees for residential customers will continue to increase at an annual rate of

28.1% based on two years of increase from 2018 to 2020" which results in "more than a 100% increase in merchant fees between 2020 and the projected test year." 8 Tr 4864. The Attorney General takes issue with the company's forecast as "it assumes the rate of increase from 2018 to 2020 will continue unabated . . . ." 8 Tr 4864. The Attorney General demonstrates that 2021 actual data shows that in 2021, the company incurred $9.9 million in residential merchant fees, only a 5% increase between 2020 and 2021. 8 Tr 1865; Exhibit AG-1.46.

DTE Electric attributes the rise in merchant fees to "the volume of payment transactions and the rate of fees (per transaction) charged by the various credit and debit card companies and banking institutions." 7 Tr 2527. DTE Electric argues that "the merchant fee forecast is derived by the growth in actual transaction fees assessed to DTE Electric on an annual basis." 7 Tr 2527. DTE Electric did not provide any information about increased transaction volumes or rates on the record. *See*, Attorney General's reply brief, p. 34. As DTE Electric failed to support its projected merchant fees, the Commission adopts the Attorney General's proposed $8.2 million reduction to the company's projected test year O&M expense.

The Commission reiterates its position from the May 8 order, recognizing the increased popularity and added convenience of allowing customers to pay by credit card. *See*, May 8 order, p. 193. In DTE Electric's last rate case, the Commission adopted the company's merchant fee expense and further directed "DTE Electric to work with the Staff on methodologies to better evaluate the impacts and attributions of this practice going forward and to provide information on this collaboration in its next rate case filing." May 8 order, p. 193. The Commission appreciates DTE Electric's efforts to work with the Staff to ensure no cross-subsidization would occur across rate schedules related to merchant fees, addressing the Staff's primary concern from Case No. U-20561. The Commission requests that DTE Electric also work with the Staff prior to the filing of its next rate case to ensure that cross-subsidization of merchant fees does not occur between residential customers with access to credit and those without.

5. Uncollectible Expense

DTE Electric projected a $59,573,000 test year uncollectible expense. 5 Tr 822; Exhibit A-13, Schedule C5.8. DTE Electric excluded the 2018 historical data from its test year average as the "[u]ncollectible expense was abnormally high during 2018 due to system issues and delayed collections, resulting from the Customer 360 (C360) billing system implementation." 5 Tr 822. DTE Electric continued to object to the Commission and the Staff's cash-basis method of measuring annual uncollectible expenses adopted in Case No. U-20162 in favor of an accrual method. 5 Tr 823. Additionally, DTE Electric testified that charges related to the company's LIA programs should be included in uncollectible expense.

The Staff and the Attorney General recommended alternative expense forecasts. The Staff recommended a $9.56 million disallowance to the company's projection based on a cash-basis method and three-year average from 2019 to 2021. 8 Tr 5460; Exhibits S-18 and S-18.1. This methodology resulted in a total test year expense projection of $50.01 million.

The Attorney General testified that she used the Commission-approved cash-basis method and calculated a reduction of $9,379,000 based on a three-year average of the years 2017, 2020, and 2021. 8 Tr 4862-4863; Exhibit AG-1.44. The Attorney General explained that she omitted the years 2018 and 2019 due to DTE Electric's suspension of collection activity for several months while it resolved data and systems issues. 8 Tr 4862. The Attorney General explained that the cash-basis method is more appropriate to calculate uncollectible expense as:

> [t]he booked expense for uncollectible accounts can fluctuate from year to year due to a number of reasons including assumptions made by the Company, temporary events, and the adequacy of the reserve account at the outset of any one particular

> year. Therefore, using booked uncollectible expense, as the Company has done in this case, is not wise or appropriate.

8 Tr 4862.

In rebuttal testimony, DTE Electric argued that if the cash-basis method is to be used, the Staff needs to correct its electric sales revenue and present revenue to use a forward test year. *See*, 5 Tr 829-830. Using the updated revenues and cash-basis method for determining uncollectible expense, DTE Electric calculated an expense of $55,398,915. DTE Electric stated that, "[i]f the Commission agrees with the Staff's methodology, DTE [Electric] does not dispute the $4.174 million reduction from its original projection of $59.573 million based on the inclusion of 2021 actuals and the required corrections to [the Staff]'s calculation." 5 Tr 830. The Staff agreed with the company's calculation in brief. Staff's initial brief, pp. 173-174.

DTE Electric objected to the Attorney General's use of 2017, 2020 and 2021 as a three-year historical average. DTE Electric noted that:

> [a]lthough 2019 write-offs were higher than normal it is important to note that 2021 write-offs were also historically low which is also bringing down the 3-year historical average. Given the significant amount of one-time stimulus and energy assistance our customers have received which have temporarily reduced write-offs, the Company believes it is appropriate to use a 2019 through 2021 3-year average to estimate projected uncollectable expense.

5 Tr 831.

In her initial brief, the Attorney General noted that the Commission has consistently rejected using an accrual methodology for projecting uncollectible expense. *See*, Attorney General's initial brief, p. 28. The Attorney General stated that DTE Electric confirmed through discovery that "removal of the 2019 net-charge offs is legitimate due to the impact of the C360 implementation." *Id*., p. 29 (citing Exhibit AG-1.58, p. 4). The Attorney General recommended that the

Commission adopt her original position and remove $8.2 million from the company's projected test year O&M expense.

In its initial brief, DTE Electric acknowledged that the Commission adopted a cash-basis method in its May 2 order but maintained "that the cash basis method of estimating uncollectible expense is inconsistent with how expense is recorded and with how other costs and revenues are calculated for both [Commission] reporting and for ratemaking." DTE Electric's initial brief, pp. 197-198.

The ALJ found that DTE Electric acknowledged in discovery "that the Uniform System of Accounts does not prevent the company from using historical net charge-offs as a basis to estimate future uncollectible costs for accrual of the Uncollectible Accounts provision." PFD, p. 493 (citing Exhibit AG-1.58, p. 1). The ALJ found that the same exhibit showed that DTE Electric acknowledged "that the C360 implementation impacted the 2019 charge-offs." PFD, p. 493 (citing Exhibit AG-1.58, p. 4). On this basis, the ALJ concluded that the Attorney General reasonably excluded 2018 and 2019 from the three-year historical average. Further, the ALJ found that "the company's preference to use 2019 through 2021, when it acknowledges issues with both 2019 and 2021 is not a reason to reject the [Attorney General]'s analysis." PFD, p. 493.

DTE Electric takes exception to reassert that "that the cash basis method of estimating uncollectible expense is inconsistent with how expense is recorded and with how other costs and revenues are calculated for both [Commission] reporting and for ratemaking." DTE Electric's exceptions, p. 183. DTE Electric maintains that an accrual method is more appropriate and that "[t]he estimation of future expenses should be consistent with the practice used to record the actual expenses to ensure recovery of the Company's reasonable and prudent costs." *Id.* The company also maintains its objection to the cash-basis method and supports its original projection.

DTE Electric states, however, that if a cash-basis method is used for determining uncollectible expense, "then [the] Staff's forecast using an updated 2019-2021 three-year average of net write offs as a percentage (%) of revenue to forecast projected uncollectible expense is reasonable, rather than the [Attorney General]'s selective use of 2017, 2020 and 2021." *Id*. (internal citation omitted). Additionally, DTE Electric states that if a cash-basis method is to be used, the company's proposed corrections, outlined above, should be adopted, resulting in an uncollectible expense of $55,398,915. *Id*., p. 184.

The Attorney General replies to DTE Electric, maintaining that the ALJ was correct in her analysis and recommendation regarding the company's uncollectible expense. The Attorney General asserts that there is no prescribed method under the USOA for estimating uncollectible accounts expense or preventing the company from using the approach proposed by the Attorney General and the Staff. *See*, Attorney General's replies to exceptions, pp. 60-61.

The Attorney General corrects DTE Electric's assertion that the Attorney General used a five-year average to calculate the appropriate uncollectible expense ratio applied to forecasted sales revenue for the projected test year. The Attorney General states that it "used the three years of net charge-offs to sales revenues for 2017, 2020, and 2021 . . . ." *Id*., p. 61. The Attorney General also states that the ALJ made an "inadvertent misstatement" that the Attorney General did not include the year 2021 in its normalization of the net charge-offs but came to the correct conclusion to remove $9.4 million of uncollectible accounts expense from the company's revenue requirement. *Id*., p. 62. Finally, the Attorney General objects to DTE Electric's argument that the Commission should adopt the Staff's recommended disallowance with corrections rather than the Attorney General's proposed disallowance. The Attorney General asserts that "[the] Staff's calculation improperly included the 2019 unusual net-charge offs tainted by the Customer 360 collection problems." *Id*. The Attorney General concludes that "[t]he Commission should reject DTE [Electric]'s exception and adopt the [Attorney General]'s and ALJ's recommended amount for uncollectible accounts expense." *Id*., p. 63.

The Commission agrees with the reasoning of the ALJ. The Commission finds that based on the record evidence that 2019 data was impacted by the implementation of C360, and the Commission's previous orders adopting the cash-basis method for projecting uncollectible expense, it is reasonable to adopt the Attorney General's position. The Commission adopts the Attorney General's reduction of $9,379,000 for an uncollectible expense of $50,194,000.

6. Regulated Marketing

DTE Electric testified in support of a $23,980,000 O&M expense allowance for regulated marketing. 7 Tr 2499; Exhibit A-13, Schedule C5.9. The only disputed cost was $183,000 for the residential battery pilot, discussed below. Based on the ALJ's recommended disapproval of the residential battery pilot, the ALJ also recommended that the associated projected costs be excluded from rate base. PFD, p. 494.

No exceptions were filed on this issue.

The Commission adopts DTE Electric's proposed regulated marketing expense, less the costs associated with the residential battery pilot for reasons discussed in Other Revenue-Related Items, Pilot Programs, Residential Battery Pilot, below.

7. Corporate Support Group

a. Staff Shift of Information Technology Capital Costs to Operations and Maintenance

The Staff found that certain portions of the projected IT program capital expenditures were unsupported with reference to the company's capitalization policy. *See*, 8 Tr 5227-5230. The Staff recommended that "the projected bridge period and test year capital costs associated with the

Clicksoft Application Health, Distribution Operations Application Health, and Fuel Supply Application Health projects . . . . be expensed (O&M) and not capitalized due to the Company's own accounting guidance." 8 Tr 5230.

The ALJ noted here that "a more extensive evaluation of the company's capitalization policies is recommended . . . with the expectation it will provide for more complete evaluation of the company's projected spending in rate cases." PFD, p. 494. With that caveat, the ALJ stated that "reclassifying DTE [Electric]'s capital expense projections as O&M raises additional issues whether DTE [Electric] will actually spend the projected amounts or find alternatives for the additional funding" as "DTE [Electric] clearly has incentives to reduce its O&M expenses." *Id*. The ALJ concluded that the amounts the Staff proposes to transfer from capital expenditures to O&M expenses are not large and that she "appreciates Staff's continued focus on consistency." *Id*. Thus, the ALJ concluded that it is reasonable to increase the O&M expense by the amount requested by the Staff.

DTE Electric's exceptions to the ALJ's recommendation regarding the O&M expense involve the Staff's shifting and disallowance proposals and are addressed above in Rate Base, Information Technology, Plant and Field Projects. *See*, DTE Electric's exceptions, pp. 184-185.

No replies to exceptions were filed on this issue.

In congruence with the decisions made above that the projections identified by the Staff be excluded from rate base, the Commission allows the named costs as O&M expense.

b. Staff Information Technology Operations and Maintenance Expense Reduction

The Staff's recommended capital disallowances were accompanied by recommended O&M expense reductions associated with capital projects. The Staff proposed a total reduction of $11.2 million for IT O&M expenses. 8 Tr 5341; Exhibit S-12.8. This cost category consisted of

$1,074,604 in capital expenditures that were deemed inappropriate to be capitalized and moved to O&M, as discussed above. This category also consisted of a 0.5% overall adjustment to IT O&M based on a 9.5% baseline for calculating IT O&M and Level 1 and Level 2 project disallowances, discussed below.

i. Overall Adjustment

The Staff explained that "IT O&M costs covers deployment activities related to development work" and is "based on a percentage of capital cost . . . ." 8 Tr 5236. The Staff testified that "10% of capital cost is typically used as a baseline for calculating IT O&M costs[;]" however, the percentage of capital costs "varies from 6-13% in actuality . . . ." 8 Tr 5236; Exhibit S-7.49. The Staff recommended that a midpoint of 9.5% be used to calculate IT O&M costs. 8 Tr 5236. The Staff testified that the 0.5% reduction to the baseline for IT O&M costs results in a disallowance of $2,876,229 in the test year. 8 Tr 5236; Exhibit S-7.50.

In rebuttal, DTE Electric objected to the Staff's proposed 0.5% adjustment to the IT O&M expense. DTE Electric testified that the Staff "assumes that all IT O&M is related to capital projects. This assumption is incorrect." 7 Tr 2778. Further, DTE Electric explained that "not all IT expenses are associated with a capital project, and that the O&M noted in individual business cases are not used to calculate projected O&M." 7 Tr 2778. In its initial brief, DTE Electric relied on the arguments outlined above. *See*, DTE Electric's initial brief, pp. 129-130.

In its initial brief, the Staff asserted that "[t]hough [the company] claims much of IT O&M costs are for IT expenses that are unassociated with a capital project . . . there is little information provided in the rate case to detail what IT O&M costs actually support." Staff's initial brief, p. 170. The Staff reasoned that "[m]any IT projects increase efficiencies in Company operations and business. At some point, one would expect the efficiency gains from these ratepayer investments would result in reduced O&M costs. Yet the Company's methodology for projecting IT O&M ensures that these costs will only grow with each rate case." *Id*., pp. 170-171. The Staff recommended that the Commission adopt its proposed O&M disallowance of $2,876,229 in the test year. *Id*., p. 171.

ii. Project Disallowances

The Staff recommended a $5.88 million O&M disallowance for Level 1 projects and a $3.523 million O&M disallowance for Level 2 projects. 8 Tr 5344-5345; *see also*, Exhibit S-12.8, lines 35 and 36; Exhibit S-12.3; Exhibit S-12.5, pp. 5, 7. As explained above, the Staff recommended a complete disallowance of Level 1 cost estimates as the Staff was unable, despite numerous attempts through discovery, to understand the methodology used to arrive at such cost estimates. As such, the Staff testified that it "believes it is unfair to pass the cost of the . . . projects on to ratepayers at this time." 8 Tr 5343. Under similar reasoning, the Staff also recommended a 20% reduction to Level 2 project O&M expenses in the test period, reasoning that "[w]hile Level 2 cost estimates are more mature and include a breakdown of cost criteria, these projected costs do not have a definite scope or schedule. As a result, these costs are incomplete." 8 Tr 5345; Exhibit S-12.4, p. 3.

In rebuttal testimony, DTE Electric asserted that "IT O&M adjustments were not specifically included in the Company's requested revenue deficiency" as the company uses the 2020 historical expense adjusted for inflation. 7 Tr 2777 (citing Exhibit A-13, Schedule C5). The company posited that "should the Commission decide to disallow the O&M, it must be reduced by the amount applicable to DTE Electric" as the "O&M cited by Staff is the amount supporting all users of the assets." 7 Tr 2777. The company asserted that "[t]he actual IT O&M costs recorded at DTE Electric are based on the bill down of costs from [DTE Energy Corporate Services, LLC], or about 73% of the total" and should the Commission choose to disallow O&M related to IT projects, the disallowance should be reduced accordingly. 7 Tr 2777-2778.

In its initial brief, the Staff revised its IT O&M disallowance for Level 1 and 2 projects from a combined $9.403 million consisting of all of Level 1 projects and 20% of Level 2 projects to $6.864 million to recognize that the actual IT O&M costs recorded at DTE Electric comprise only 73% of the total costs of DTE Energy Company. Staff's initial brief, p. 171.

The ALJ found the Staff's analysis to be persuasive and concluded that its adjustments should be adopted. PFD, p. 496.

No exceptions were filed on this issue.

The Commission finds the ALJ's decision to be well-reasoned and supported by the record. The Commission adopts the ALJ's recommendation and the Staff's proposed disallowance and adjustment to the IT O&M expense.

8. Employee Pensions & Benefits

a. Healthcare

DTE Electric projected an increased healthcare expense from $41,351,000 in the historical test year to $55,504,000 in the projected test period. 7 Tr 1796; Exhibit A-13, Schedule C5.11, line 11. DTE Electric attributed the increase to normalizations of the 2020 healthcare expense to compensate for the effects of the COVID-19 pandemic and a five-year average of constant dollar active healthcare costs. 7 Tr 1797. The results were adjusted for projected medical cost increases of 5.5% in 2021, 5.0% in 2022, and 4.5% in 2023. 7 Tr 1796. DTE Electric noted that the Commission declined to adopt a constant dollar active healthcare cost adjustment in DTE Gas's most recent rate case, stating instead that "a multi-year average adequately captures the volatility of the expense." 7 Tr 1804 (quoting December 9 order, p. 157).

The Attorney General projected a $48,537,000 healthcare expense for the test period. 8 Tr 4867; Exhibit AG-1.47. The Attorney General criticized DTE Electric's constant dollar cost adjustment as producing an artificially high adjusted cost. *See*, 8 Tr 4867. The Attorney General explained that she arrived at her projection using the actual average cost of healthcare for 2016 through 2019, as well as an average of 2020 through 2021 to consider delayed medical procedures and doctor visits caused by the COVID-19 pandemic. The Attorney General used an average annualized increase in cost per employee of 2.5%, applied through the test year. 8 Tr 4868. Accordingly, the Attorney General urged the Commission to remove $9,482,000 from the company's projected healthcare O&M expense. 8 Tr 4869.

In rebuttal, DTE Electric objected to the factors used to calculate the Attorney General's adjustment. 7 Tr 1866. DTE Electric asserted that it was unreasonable to assume that medical treatments not performed in 2020 were performed in 2021 "without any impact on cost in subsequent years." 7 Tr 1871. DTE Electric argued that the volatility in active healthcare costs renders an annualized average "meaningless." 7 Tr 1872. DTE Electric restated that the constant dollar adjustment "is required to first set a proper starting point for a cost component that demonstrates significant volatility. . . ." 7 Tr 1874.

Without conceding to the Attorney General's methodology, DTE Electric made several corrections to the Attorney General's calculation. DTE Electric eliminated $3.1 million for 2020 costs attributed to COVID-19 and corrected the number of employees used in the calculation for 2021; as a result, the historical average annual percentage in cost per employee changed to 3%. 7 Tr 1870-1871. DTE Electric asserted that with these corrections, the Attorney General's forecast would increase from $48.5 million to $50.3 million. 7 Tr 1871.

The parties maintained their positions in briefs. *See*, DTE Electric's initial brief, pp. 201-211; Attorney General's initial brief, pp. 30-32; DTE Electric's reply brief, pp. 156-157; Attorney General's reply brief, pp. 37-39.

The ALJ recommended that the Commission reject DTE Electric's proposed constant dollar normalization adjustment to projected healthcare O&M expense as it did in DTE Gas's most recent rate case. PFD, p. 503 (citing December 9 order, pp. 156-157). The ALJ was similarly unpersuaded by DTE Electric's arguments in the present case. The ALJ specifically noted that although not dispositive, "while the company stressed that normalization was intended to set a proper starting point for adjustments, it failed to thoroughly address the Attorney General's concern that it could potentially result in compounding inflationary pressures, particularly when the normalization calculations used by DTE [Electric] included adjustments for national healthcare cost trends when calculating the five-year average cost per employee." PFD, p. 503 (citing 7 Tr 1800; Exhibit A-13, Schedule C5.11.4 Revised).

The ALJ recommended that the Commission adopt the projection proposed by the Attorney General with the corrections proposed by DTE Electric. PFD, p. 503. The ALJ restated for continuity that DTE Electric "suggested corrections to the Attorney General's modeling related to a COVID-19 adjustment, the correct number of DTE [Electric] employees for the year 2021, and the resulting annual average percentage change in the company's healthcare cost per employee." *Id*. (citing 7 Tr 1870-1871; Exhibit A-35, Schedule Z3). The ALJ stated that she believes that DTE Electric's suggested corrections were proposed in good faith and thus recommended that the Commission adopt the resulting healthcare expense projection of $50,294,000, which was a reduction of $5,210,000 from DTE Electric's projected healthcare O&M expense. PFD, p. 504.

DTE Electric takes exception to the ALJ's recommendation and maintains its original position. DTE Electric argues that the Attorney General's recommended projection is $2.8 million lower than the company's actual active healthcare expense incurred in 2021. DTE Electric's exceptions, p. 187. The company asserts that the normalization adjustment it proposed "is needed to establish an accurate starting point because year-to-year volatility of actual Active Healthcare costs . . . makes any historical period expense potentially unreliable as a starting point to project costs." *Id*., p. 188. DTE Electric quotes the May 8 order in its last general rate case, which it claims adopted a constant-dollar adjustment for emergent replacement expenditures. However, the company "recognizes that the Commission recently declined to adopt a similar constant dollar normalization adjustment for DTE Gas's Active Healthcare costs . . . ." DTE Electric's exceptions, pp. 188, 189. The company states that it disagrees with the Commission's decision as "averages of historical cost increases only measure annual changes in costs, which is distinguishable from determining the proper starting point, from which projected increases are then applied." *Id*., p. 189 (internal citation omitted).

DTE Electric also argues that the historical annual average of the company's actual active healthcare costs of 2.5% computed by the Attorney General is inappropriate due to the volatility in active healthcare costs. DTE Electric's exceptions, p. 190. DTE Electric opines that the likelihood that the company will continue to incur elevated active healthcare costs is reflected in its proposed 9.9% increase in the company's active healthcare costs. DTE Electric recommends that the Commission approve the company's $55.5 million active healthcare expense and reject the ALJ's recommended $5.2 million reduction. *Id*., p. 191.

The Attorney General replies to DTE Electric's exceptions to reassert that the Commission has formerly rejected the company's proposal to use a constant dollar normalization in calculating its expense. The Attorney General recommends that the Commission "reject DTE [Electric]'s exception and adopt the ALJ's recommendation of a reduction of at least $5.2 million from DTE [Electric]'s position." Attorney General's replies to exceptions, p. 65.

The Commission finds the ALJ's decision to be well reasoned and supported by the record and adopts the Attorney General's proposed reduction of $5,210,000 from DTE Electric's projected healthcare O&M expense in accordance with the ALJ's decision.

b. Pension Expenses

DTE Electric testified to the five components of the company's pension expense: service costs, interest costs, expected return on assets, unrecognized gains and losses, and prior service costs. DTE Electric projected a decrease in the company's pension cost for the projected test year from $92.9 million to $13.5 million. 7 Tr 1787. Of these components, the company's return on assets was the only expense debated by intervening parties.

DTE Electric projected an annual expected return on assets of 7.00% for 2021, 6.80% for 2022, and 6.70% for 2023. 7 Tr 1786. DTE Electric testified that the projections "reflect a planned increase in fixed income asset allocation due to a projected increase in funded status." 7 Tr 1786. DTE Electric explained that the company's projected pension costs "are based on discount rates as of December 31, 2020, and the Company's expected rate of return on assets is based on long-term investment performance expectations based on the funded status at December 31, 2020." 7 Tr 1788. DTE Electric noted, however, that "changes in the interest rate environment at any given year end and short-term variations between the actual annual rate of return and the expected annual rate of return can have a significant impact on the Company's actual annual pension costs." 7 Tr 1788.

Due to this noted volatility, DTE Electric proposed the Commission adopt a deferral mechanism for pension costs similar to that in place for the other post-employment benefit

(OPEB) expense. 7 Tr 1790. The company explained that "if the Commission adopts the Company's proposal to defer any actual pension expense to a Regulatory Asset or Liability, the pension expense for the projected test year would be eliminated." 7 Tr 1790. DTE Electric further provided that the "[a]ctual pension expense will be deferred as a regulatory asset if positive, or a regulatory liability if negative. The net deferred amount will be carried on the balance sheet for review in a future rate case, similar to the OPEB deferral." 7 Tr 2712. DTE Electric noted that this treatment would be consistent with the approved deferral of pension expense for DTE Gas. 7 Tr 2717; *see also*, December 9 order, p. 154.

The Attorney General took issue with the company's declining projected return on pension assets. The Attorney General noted a trend in declining return on assets in two prior rate cases and posited that:

> [t]he declining expected return rate on plan assets is not justified by the actual returns earned by the plan assets over the past 12 years. Although actual return can go up and down from year to year. Over the past 12 years, from 2010 to 2021, the Company's pension assets have earned on average return of 8.94%.

8 Tr 4870 (citing Exhibit AG-1.48). Thus, the Attorney General argued that the projected decline of return on pension assets is unrealistic. In response to DTE Electric's explanation that the decline was attributed to fixed-income investments, the Attorney General stated that discovery showed "the Company provided target asset mix percentages for 2023 that do not change much from the actual mix in 2021." 8 Tr 4870. The Attorney General also testified that "the opposite has been forecasted by the Company with equity investments increasing from 28.9% in 2021 to 31% in 2023 and fixed income declining from 47.3% to 45% for the same years." 8 Tr 4870-4871 (citing Exhibit AG-1.48). The Attorney General also criticized DTE Electric's use of a 2.57% discount rate as "stale," stating that "the Company's 2021 financial statements included in the Company's Form 10K for 2021, the Company used a higher discount rate of 2.91%." 8 Tr 4871.

The Attorney General posited that the use of a higher discount rate would result in a lower pension expense.

The Attorney General asserted that an analysis using the actual plan asset return of 8.4% in 2021, the 2.91% discount rate, and maintaining the expected rate of return at 7.00% in subsequent years resulted in a pension expense for the projected test year of negative $8,297,000, for a net reduction of $17,442,000 from the company's projected expense. 8 Tr 4872; Exhibit AG-1.48. The Attorney General recommended that the Commission adopt this proposed disallowance.

In rebuttal, DTE Electric identified three flaws with the Attorney General's analysis. First, the company contended that the analysis performed in discovery resulting in the Attorney General's proposed disallowance was not subject to the same analytical rigor as a formal projection of pension costs performed by the company's independent actuaries, as the Commission has required in the past. Second, DTE Electric argued that the Attorney General's assumption that the return on assets would remain at 7.00% for the entire projected test period was unreasonable. Third, the company asserted that the Attorney General's proposal was at odds with DTE Electric's proposal to implement a deferral mechanism. *See*, 7 Tr 1876-1877.

DTE Electric also refuted the Attorney General's reliance on actual return on pension assets and her assertion that fixed-income allocations were decreasing. *See*, 7 Tr 1876-1881. DTE Electric introduced the most recent projection of pension costs prepared by the company's actuary on rebuttal with the actual funded status as of December 31, 2021, updated asset allocations, and a 2.91% discount rate. 7 Tr 1882; Exhibit A-35, Schedule Z6. The company provided an updated estimated return on assets of 7.0% for 2021, 6.80% for 2022, and 6.60% for 2023. The pension costs for the projected test period were negative $0.2 million, which results in a net pension cost of

$0.6 million. 7 Tr 1882; Exhibit A-35; Schedule Z6. DTE Electric emphasized that a deferral mechanism would eliminate the uncertainty of future pension expenses.

In its initial brief, DTE Electric summarized its above arguments and requested the Commission adopt its updated pension expense of $0.6 million or a pension deferral mechanism. *See*, DTE Electric's initial brief, pp. 201-205. In her initial brief, the Attorney General "recommend[ed] that the Commission accept the updated run of pension expense provided by the Company in response to AGDE-8.270 included in Exhibit AG-1.48, which lowers pension expense for the projected test year by $17,442,000." Attorney General's initial brief, p. 36. The Attorney General contended that the Commission should not be dissuaded from accepting a negative pension expense as the Commission has previously adopted a negative OPEB expense for inclusion in rates. *Id*., p. 35 (referencing Case No. U-20697). The parties maintained that the Commission should adopt either her recommended $17,442,000 disallowance or the company's updated projection. The parties maintained their positions in reply briefs.

The ALJ recommended the "creation of a deferral mechanism for pension expense to alleviate the uncertainty surrounding the volatility of pension expense projections." PFD, p. 511. The ALJ reasoned that "the volatility in pension expense is evidenced not just by the gap between the company's projection and the Attorney General's preferred projection, but also by the gap between the company's initial projection and its own updated projection." *Id*. The ALJ noted that while the parties disagree about the projected expense, there is consensus that the pension expense could ultimately be negative. The ALJ also posited that "creating a deferral mechanism for pension expense in this case aligns with the Commission's treatment of pension expense for DTE Gas, and adopting a consistent approach for these related utilities is appropriate." *Id*. (citing December 9 order, p. 154). The ALJ recommended approval of DTE Electric's proposed accounting method of "treating the pension expense as a regulatory asset if positive, and as a regulatory liability if negative, such that the amount reflected in rates is zero with the actual expense deferred for future recovery or refund." PFD, pp. 511-512.

> The Attorney General takes exception to the ALJ's recommendation and asserts that the Commission has generally rejected costs trackers in the past. The Attorney General argues that: [e]xpense or cost trackers remove the incentive for the utility to control costs because they allow a direct passthrough of any cost increases to customers. This removes any incentive for the utility to control costs, where otherwise it would work to find alternatives to avoid or minimize costs that would negatively impact its own bottom line.

Attorney General's exceptions, pp. 15-16. The Attorney General posits "that there is no need to establish a cost deferral or tracking mechanism" in this case and the Commission should "instead adopt the fair and reasonable adjustments to pension expense" proposed by the Attorney General. *Id*., p. 16. The Attorney General continues to support her updated analysis which lowers the pension expense by $17,442,000.

DTE Electric replies to the Attorney General's exceptions and restates its position from its direct testimony and briefs. The company posits that the sensitivities it prepared in response to the Attorney General's discovery requests "do not reflect the same analytical rigor that would be used in a formal projection of pension costs by the Company's independent actuaries." DTE Electric's replies to exceptions, p. 56. DTE Electric also reasserts that its proposed tracking mechanism should be adopted by the Commission as recommended by the ALJ.

The Commission finds the ALJ's decision to be well reasoned and supported by the record; thus, the Commission adopts the treatment of pension expense as a regulatory asset or liability and will treat the amount reflected in rates as zero.

9. Incentive Compensation

DTE Electric requested full funding of $63,763,000 million it associated with its employee incentive compensation programs (EICPs) and recovery of an additional $5.9 million in restricted stock grants that are a part of the company's long-term incentive program. 7 Tr 1821, 1834.

a. Employee Incentive Compensation Program

DTE Electric provided an analysis in Exhibit A-21, Schedule K6 of a total customer benefit of $105.6 million relative to the $63.8 million EICP expense. 7 Tr 1835. DTE Electric acknowledged that in the company's last rate case, the Commission did not include the projected costs of the incentive compensation programs associated with financial measures in the revenue requirement. Specifically, DTE Electric noted:

> The Commission apparently rejected the inclusion of the incentive compensation expense related to the financial measures based, in part, by opining that "DTE Gas's mere contention that customers receive benefits from well-compensated employees is insufficient to demonstrate that incentive compensation specifically tied to financial performance does not primarily benefit shareholders or that such benefits to ratepayers are commensurate with the proposed expense."

7 Tr 1843-1844 (quoting December 9 order, p. 163). DTE Electric disagreed with the Commission's order and contended that "because the total quantified benefits of all measures exceed the aggregate expense, it is proper to include all incentive compensation expense, including the portion related to the financial measures" and "the Company's total compensation, inclusive of incentive compensation, is well aligned with market medians." 7 Tr 1844.

The Staff recommended that the Commission disallow $42,537,000 of incentive costs associated with financial measures but allow $21,225,000 in incentives for non-financial measures. 8 Tr 5263; Exhibit S-8.1. The Staff outlined 12 orders in which the Commission has previously rejected incentive compensation associated with financial measures from the revenue requirement. According to the Staff, "the Commission found that incentive compensation plans that were tied to

Company earnings and cash flow were financial considerations that largely benefited shareholders and should not be paid for by ratepayers." 8 Tr 5262 (citing December 22, 2005 order in Case No. U-14347, p. 35). The Staff also posited that the Commission "has found that long-term incentive compensation is tied closely to company earnings and cashflow that benefits the shareholders more than ratepayers." 8 Tr 5262 (citing November 19 order, p. 78).

ABATE also recommended that the Commission exclude incentive plan costs associated with financial measures. 8 Tr 3009, 3018-3019.

The Attorney General asserted that her "overall assessment is that the three incentive plans are too heavily skewed toward measures that directly benefit shareholders and not customers." 8 Tr 4875. The Attorney General noted that "$41.5 million out of the $63.8 million of incentive compensation expense requested pertains to the Company's financial metrics." 8 Tr 4875. The Attorney General recommended that the Commission exclude the incentive compensation related to financial measures. Additionally, the Attorney General reviewed the operating measures and benefit calculations presented by DTE Electric. Based on an uncertainty of whether DTE Electric will achieve sufficient performance to justify the target level payouts for operating measures it seeks to fund through its rates, the Attorney General recommended that ratepayer funding for operational measures be limited to 60% of the target level based on the non-financial metrics achieved at target or better from 2017-2021. 8 Tr 4880-4881.

Energy Michigan proposed that the Commission exclude all measures from DTE Electric's incentive compensation program that have costs greater than benefits. 8 Tr 4500. Energy Michigan presented a table of expenses exceeding benefits and testified that for the measures whose costs exceed benefits, the total cost is $40,274,000 while the total benefit is only $1,853,000. 8 Tr 4497. Energy Michigan attested that "excluding the negative-value measures is a superior result because it increases the net gain while at the same time reducing the cost of the program." 8 Tr 4500 (emphasis omitted).

In rebuttal testimony, DTE Electric reiterated its view that financial measures benefit ratepayers as well as shareholders and therefore compensation for financial measures should be funded by ratepayers. *See*, 7 Tr 1850-1865. Specifically, DTE Electric took issue with the Staff's $1.1 million adjustment to the long-term incentive plan (LTIP) expense dependent on nuclear generation business unit operating measures as "these measures are unrelated to financial results and therefore meet the Commission's traditional practice of requiring quantified customer benefits through improved reliability and lower costs." 7 Tr 1848-1849.

DTE Electric also objected to the Attorney General's analysis omitting performance above target levels on some operating measures to offset failures to meet target level performance in other operating measures. DTE Electric presented evidence that "actual weighted performance for the last five years was 96.5% for the AIP [annual incentive plan] and 83.4% for the [rewarding employees plan] for a combined average of 89.9%." 7 Tr 1860; Exhibit A-35, Schedule Z1. DTE Electric asserted that it is unreasonable "to assume that only 60% of the operating performance measures will be achieved in the projected test year." 7 Tr 1861.

DTE Electric objected to Energy Michigan's recommendation that the Commission exclude all measures from DTE Electric's incentive compensation program which have costs greater than benefits. DTE Electric posed that "the mere fact that some of the measures related to the financial performance have no directly quantifiable benefits, does not mean that there [are not] considerable non-quantifiable benefits . . . ." 7 Tr 1864.

The parties maintained their positions in their initial and reply briefs. *See*, DTE Electric's initial brief, pp. 211-221; DTE Electric's reply brief, pp. 157-163; Staff's initial brief, pp. 175-179;

Attorney General's initial brief, pp. 37-40; Attorney General's reply brief, pp. 39-40; ABATE's initial brief, pp. 56-57; ABATE's reply brief, pp. 17-18.

The ALJ found that the Staff's recommendation should be adopted in this matter. The ALJ noted that DTE Electric presented the same justification for its analysis in this case as in prior cases. The ALJ did not find DTE Electric's BCA persuasive as it does not attempt to "isolate the potential marginal contribution of its employee incentives to the benefits ascribed, but instead assumes that benefits funded heavily by ratepayers are entirely due to the incentive programs." PFD, pp. 521-522. The ALJ found that "DTE [Electric]'s assumption of benefits for maintaining the company's credit rating are a prime example of this unsupported assumption." *Id*., p. 522. The ALJ concluded that DTE Electric has not established on the present record that ratepayers benefit from the company's financial measures.

The ALJ also addressed each intervenor's alternative proposal. First, the ALJ noted her reluctance to adopt the incentive compensation approach taken in the December 9 order in DTE Gas's rate case, Case No. U-20940, as proposed by the company. The ALJ stated that "[w]hile it does give the Commission the ability to tie the company's receipt of funds to achievement of the performance objectives, it does create another issue to resolve in rate cases . . . ." PFD, p. 523. The ALJ further noted that DTE Electric did not present its test year objectives which would be a prerequisite for accountability.

The ALJ stated that DTE Electric is not demonstrating a responsiveness to the Commission's guidance on employee incentive compensation. Specifically:

> notwithstanding the Commission's focus on operational measures for ratepayer funding, DTE [Electric] has increased the size of its employee incentive compensation expense by approximately 34%, from $47.6 million in Case No. U-20561 to $63.8 million in this case, but has increased the portion related to financial measures by approximately 45%.

PFD, p. 524.

In her exceptions, the Attorney General agrees with the ALJ's conclusion that DTE Electric "presents the same analysis in this case as it has in prior cases and does not present any new evidence that would sway the Commission from past decisions." Attorney General's exceptions, p. 17. The Attorney General also agrees with the ALJ's finding that DTE Electric "has not established that ratepayers benefit from the financial measures." *Id*. The Attorney General argues that the logical conclusion is to adopt her position and take the same approach to pension expense as the Commission approved in DTE Gas's most recently concluded rate case, Case No. U-20940, including adopting a requirement that operating measures be determined in advance of a rate case and that recovery be limited to target performance for each of the operating measures.

Energy Michigan takes exception to the ALJ's recommendation and asserts that the Commission should clarify that utilities are responsible for demonstrating that the benefits of their individual incentive compensation measures exceed their costs. Energy Michigan supports the disallowance recommended by the ALJ but urges the Commission to provide further guidance to DTE Electric and other utilities "regarding the appropriateness of rate recovery for employee incentive compensation measures that result in a net cost to ratepayers." Energy Michigan's exceptions, p. 4. Energy Michigan maintains its position that the descriptions of the performance measures provided by DTE Electric for EICP were inadequate. Energy Michigan requests the Commission clarify that "it will disallow costs attributable to measures contained in utilities' employee incentive plans whose costs exceed their benefits to ratepayers." *Id*., p. 5.

DTE Electric takes exception to the ALJ's recommendation to exclude $42,537,000 representing incentive compensation expense related to financial measures, as proposed by the Staff. DTE Electric argues that financial measures cannot be "categorically disallowed," and must be based on present evidence despite the Commission's previous orders. DTE Electric's exceptions, p. 192. The company attests that "[i]ncentive compensation programs are an increasingly prevalent practice among the vast majority of energy companies. Therefore, DTE Electric must also offer incentive compensation opportunities to be competitive with other employers in attracting and retaining talented and qualified employees . . . ." *Id*., p. 193 (internal citation omitted) (footnote omitted).

DTE Electric also takes exception to the ALJ's recommendation on the basis that the Staff's proposed disallowance includes $1.064 million of LTIP expense dependent on nuclear generation business unit operating measures. DTE Electric maintains its position that "[t]his proposed disallowance is improper because the payouts are driven by operating measures that are unrelated to financial results . . . and therefore meet the Commission's traditional practice of requiring quantified customer benefits through improved reliability and lower costs." *Id*., p. 195 (internal citation omitted). DTE Electric requests the Commission reject the ALJ's recommended reduction of $42.5 million for incentive compensation expense.

ABATE replies to DTE Electric's exceptions to assert that, as has been "explained across numerous records in numerous cases, very much including this one, incentive compensation related to financial measures cannot reasonably be collected from ratepayers." ABATE's replies to exceptions, p. 13. ABATE maintains that the Commission has consistently rejected incentive compensation related to financial measures as unreasonable and imprudent and should continue to do so in this case.

The Attorney General replies to DTE Electric's exceptions and states that the company has failed to provide evidence to support quantifiable benefits to ratepayers from costs associated with financial measures. The Attorney General recommends that the Commission reject DTE Electric's exceptions and adopt the ALJ's recommendation. *See*, Attorney General's replies to exceptions, pp. 65-67.

DTE Electric replies to the exceptions of both the Attorney General and Energy Michigan. In response to the Attorney General's proposal that the Commission disallow 40% of incentive compensation expense relating to operating measures based on her analysis of the operating performance levels achieved from 2017 to 2021, DTE Electric asserts that its actual weighted performance was higher than what was proposed by the Attorney General. *See*, DTE Electric's replies to exceptions, p. 60. DTE Electric quotes the April 18 order where the Commission declined to adopt an approach that disallows incentive compensation based on historical performance. *See*, *id*., p. 61.

DTE Electric responds to Energy Michigan's exception stating that the Commission should require the company to demonstrate that the benefits of its individual incentive compensation measures exceed their costs. DTE Electric states that its BCA, presented in Exhibit A-21, Schedule K6, "represents only the reasonably-quantified financial benefits of the Company achieving target performance for each of the metrics included in the incentive compensation plans." DTE Electric's replies to exceptions, p. 62. DTE Electric asserts that "certain measures provide benefits to customers but evade specific quantification." *Id*. DTE Electric also argues that "Energy Michigan's proposal is a new, unreasonable, and unsupported interpretation of the Commission's standard for recovering incentive compensation expense, which has consistently assessed the net customer benefits on an aggregated basis, and not the net benefits for each measure individually." *Id*., p. 63 (internal citation omitted). DTE Electric concludes that:

> the Commission should approve DTE Electric's request to include all of the Company's incentive compensation expense (except for the top five DTE Energy [Company] executives) in the revenue requirement adopted in this case, reject the [ALJ]'s proposed reduction of $42.5 million for incentive compensation expense

> and $5.9 million for restricted stock expense, and reject the [Attorney General]'s and Energy Michigan's exceptions."

Id., p. 64.

The Commission finds the arguments of the Staff and the Attorney General to be persuasive on this issue. As noted by both parties, the Commission has consistently disallowed incentive compensation costs tied to financial measures. *See*, 8 Tr 3018, 5262-5263. As stated by the Staff:

> Commission decisions to exclude incentive compensation related to financial measures from the revenue requirement in preceding rate cases were founded on two premises. First, the Commission found that incentive compensation plans that were tied to Company earnings and cash flow were financial considerations that largely benefited shareholders and should not be paid by ratepayers. See [Commission] Case No. U-14347, Opinion and Order, December 11, 2005, p 35. Second, the Commission has found that long-term incentive compensation is tied closely to company earnings and cashflow that benefit the shareholders more than ratepayers. See [Commission] Case No. U-17735, Order, November 19, 2015, p 78. In [Commission] Case No. U-17767, Order, December 11, 2015, pgs. 76-77, the Commission found there was insufficient evidence to conclude that the financial measures for short term incentives (AIP and [rewarding employees plan]) showed significant benefit to ratepayers.

8 Tr 5262. Additionally, in DTE Electric's two most recent general rate cases, the Commission has disallowed incentive compensation costs tied to financial measures. *See*, May 8 order, pp. 202-203; May 2 order, pp. 91-94 (stating "incentive compensation tied to financial performance measures has not been shown to benefit ratepayers").

The Commission agrees with the ALJ that "DTE [Electric] presented the same basis analysis in this case as it has in prior cases. It does not purport to have new evidence, notwithstanding its insistence that the Commission has to review this record anew without regard to its prior cases." PFD, p. 521. In the December 22, 2005 order in Case No. U-14347, the Commission found that utilities have the burden of demonstrating how incentive compensation programs benefit ratepayers and reiterated that the benefits "at a minimum, will be commensurate with the programs' costs." December 22, 2005 order in Case No. U-14347, p. 34. The Commission reviewed Exhibit A-21, Schedule K6, which provided the company's analysis of customer benefits that it purported would be derived from the achievement of incentive compensation metrics relative to their cost. While DTE Electric testified that the overall EICP cost ($63,763,000) was outweighed by the overall EICP benefits ($105,630,000), Exhibit A-21, Schedule K6 shows that the costs associated with financial performance outweighed the benefits to customers in six out of seven metrics and cost $41,473,000 while providing $18,504,000 in benefits to customers. 7 Tr 1840; Exhibit A-21, Schedule K6, line 16, columns (k) and (*l*).

The Commission finds that the ALJ properly recommended the disallowance of recovery for incentive compensation tied to financial metrics. The Commission adopts the position of the Staff and the Attorney General that incentive compensation tied to financial performance measures has not been shown to benefit ratepayers and thus should not be recovered through rates.

For operational metrics, the Commission finds the Attorney General's arguments persuasive that DTE Electric should recover costs for operational metrics achieved at target or better over the past five years. The Commission adopts this approach consistent with its December 9 order in DTE Gas's last general rate case, Case No. U-20940. The Commission adopts the Attorney General's 40% disallowance and permits DTE Electric to recover 60% of its proposed incentive compensation expense for operational metrics. The Commission adopts the Attorney General's proposed disallowance of 40% of $21,225,000 for a total EICP expense of $12,735,000.

In addition, the Commission authorizes DTE Electric to implement a two-way tracker mechanism, which will require refunds to customers if the 60% target level is not achieved or will allow the company to recover additional funds if it exceeds the 60% target level, up to a maximum of 100% of the target level. DTE Electric shall record the over- or underrecovery, compared to the 60% base, in a regulatory asset or regulatory liability to be included in the company's next general electric rate case. As noted by the ALJ, a two-way tracker allows the Commission the ability to tie the company's receipt of funds to achievement of the performance objectives but also requires that DTE Electric present test year objectives. The Commission, therefore, directs the company to present clear operational metrics in its next general electric rate case, as the individual operational metrics will be scrutinized more closely going forward.

b. Restricted Stock

DTE Electric did not include restricted stock awards in its incentive compensation expense as "[t]he expense related to the Restricted Stock is not conditioned on any Company performance measures but rather is exclusively based on the number of shares granted at the date of grant." 7 Tr 1831. DTE Electric testified that "[t]he objective in granting shares through this program is to both motivate superior results as well as provide a means to retain key employees and is consistent with the practices of a vast majority of surveyed companies . . . ." 7 Tr 1830.

The Staff recommended that the Commission disallow $5,857,000 in restricted stock compensation as "the Commission has repeatedly disallowed any portion of compensation related to financial measures to be included in the revenue requirement." 8 Tr 5264 (citing May 8 order, pp. 202-203).

In its initial brief, the Staff responded to the company's assertion that the restricted stock expense is not dependent on the company's financial objectives or future stock price. The Staff argued that restricted stock awards are "tied to value created for shareholders, sustaining profitable growth, and rewarding financial results . . . ." Staff's initial brief, p. 179. DTE Electric relied on its direct case in its initial and reply brief. *See*, DTE Electric's initial brief, pp. 216-217; DTE Electric's reply brief, pp. 159-160.

The ALJ found that DTE Electric had not "justified that it is in ratepayers' interests to fund the restricted stock grants to executives and directors." PFD, p. 527. The ALJ reviewed the company's LTIP presented in Exhibit S-8.3 and found that "[t]he company's efforts to distinguish this compensation from any other compensation for achieving corporate financial goals are unpersuasive, and perhaps another example of the corroding influence of the company's incentive compensation programs on the credibility of the company's evidentiary presentations in rate cases." PFD, p. 528.

DTE Electric takes exception to the ALJ's recommendation to adopt the Staff's proposal for the disallowance of $5,857,000 of restricted stock expense. DTE Electric argues that restricted stock "is granted annually to encourage continued employment of certain key executives, and the value is not dependent on the Company's achievement of any financial measures." DTE Electric's exceptions, p. 195. DTE Electric requests the Commission reject the ALJ's recommended reduction of $5.9 million for restricted stock expense.

No replies to exceptions were filed on this issue.

The Commission finds the ALJ's recommendation to be well reasoned and supported by the record as well as by prior Commission decisions. The Commission adopts the Staff's proposed $5,857,000 disallowance of restricted stock expense from the company's revenue requirement in accordance with the ALJ's decision.

10. Fermi Extended Power Uprate Study

DTE Electric proposed an extended power uprate (EPU) study to "provide a detailed feasibility, scoping and estimating analysis, regarding the potential for Fermi 2 to support an EPU." 7 Tr 2571. The company projected "actual expenditures in Calendar Year 2020 and forecasted Calendar Years 2021, 2022 and 2023 are $0.0 million, $0.0 million, $0.0 million and

$4.9 million respectively . . . ." 7 Tr 2571; Exhibit A-13, Schedule C5.16. According to DTE Electric, "[p]erforming an EPU at the Fermi 2 Power Plant could yield an additional 172 Mwe [megawatt electrical] of carbon-free, baseload generation capacity for Michigan." 7 Tr 2571. DTE Electric explained that:

> [a]n EPU project would be complex with considerable scope and cost unknowns; for example, DTE Electric's level of efforts analysis provides a total EPU cost ranging between $600 million and $1,000 million with the largest drivers of cost uncertainty being unknowns regarding the margins available within Fermi 2's existing equipment such as the steam dryer, emergency equipment cooling system strainers, turbine valves, main steam lines and main unit generator to operate safely at EPU conditions or if the existing equipment must be replaced to support EPU conditions. Performing the EPU study would allow DTE Electric to narrow the uncertainty in scope and cost to support a reasonable and prudent decision for a Fermi 2 EPU.

7 Tr 2752.

The Attorney General questioned the need for an EPU study and recommended rejecting the proposal and the associated expenditures. The Attorney General noted that in discovery, DTE Electric disclosed that the $4.9 million expenditure in 2023 was not the entire cost of the study but did not disclose the entire cost. 8 Tr 4855. The Attorney General also posited that the cost to achieve the uprate of 176 MWe incremental capacity "[a]t the $1.0 billion cost . . . would translate to a cost per installed MW of capacity of $5.7 million" and "[e]ven at the low end of the estimated cost, the capacity cost would be $3.4 million per MW." 8 Tr 4856. The Attorney General compared this to the Midcontinent Independent System Operator, Inc. (MISO) Zone 7 CONE cost of capacity at $94,000 per MW. *Id*. The Attorney General opined that it is not reasonable for the company to undertake the EPU study given the vast disparity between the cost of capacity of the Fermi 2 uprate and the current cost of capacity from other resources.

In rebuttal testimony, DTE Electric asserted that the EPU study would provide value to the company "with improved understanding of the operational considerations required to operate the Fermi 2 Power Plant at EPU conditions" as opposed to a specific outcome. 7 Tr 2585-2586.

The parties maintained their positions in initial and reply briefs. *See*, Attorney General's initial brief, pp. 23-24; DTE Electric's initial brief, pp. 180-181; DTE Electric's reply brief, pp. 138-139.

The ALJ agreed with the Attorney General and recommended that the Commission disallow $4.9 million in funds for the EPU study. PFD, p. 532. The ALJ observed that DTE Electric did not rebut or address the Attorney General's assertions that even at the low end of the preliminary cost estimate, an uprate would be uneconomical in terms of cost per MW compared to other resources.

DTE Electric takes exception to the ALJ's decision and maintains its position that the EPU study would not be conducted to arrive at an outcome but to "provide a comprehensive and fully transparent analysis of the potential to safely operate Fermi 2 at EPU conditions, which would potentially increase the baseload, carbon-free generation capacity of Fermi 2 by approximately 172 Mwe [sic]." DTE Electric's exceptions, p. 197. DTE Electric avers that the "EPU study would also provide the Company with an improved understanding of the operational considerations required to operate Fermi 2 at EPU conditions, and narrow the uncertainty of scope, schedule, and expenditures associated with the work that would be required to complete an EPU, which is a reasonable and prudent approach." *Id*., pp. 197-198. DTE Electric asserts that the Attorney General acknowledges that her analysis is a "'very preliminary estimate'" and the company argues that it is inaccurate. *Id*., p. 198 (quoting 8 Tr 4855). DTE Electric concludes that the EPU study is reasonable and prudent, and the associated cost should be approved.

The Attorney General replies to DTE Electric's exceptions to reassert that the Commission should adopt the ALJ's recommendation to disallow costs associated with the EPU study. *See*, Attorney General's replies to exceptions, pp. 67-68.

The Commission finds the ALJ's recommendation to be well reasoned and supported by the record. The Commission adopts the ALJ's recommendation and Attorney General's proposed disallowance for the EPU study.

11. Corporate Memberships

DTE Electric explained its decision-making regarding corporate memberships. DTE Electric asserted that "[t]he Company acquires and maintains corporate memberships that help in our mission to provide safe, affordable, and reliable energy. Decisions regarding which memberships to obtain are typically made by individual business units." 7 Tr 2358. DTE Electric listed benchmarking, best practices, research, and networking as benefits the company receives from its named memberships.

The DAAOs argued that the Commission should exclude all corporate membership dues from DTE Electric's O&M expense that are "not specifically required by law for energy system operations." 8 Tr 4342. The DAAOs noted that there is an open FERC docket raising issues about what trade dues should be regarded as recoverable. *See*, 8 Tr 4343. The DAAOs expressed frustration that DTE Electric did not provide historical or projected dues payments for each membership organization it described in Exhibit A-27, Schedule Q1.

In its initial brief, DTE Electric acknowledged that in the company's last general rate case, the Commission "'remind[ed] the company of its continuing obligation to identify, describe, and explain projected costs associated with membership fees in future rate cases.'" DTE Electric's initial brief, p. 199 (quoting May 8 order, p. 200). DTE Electric asserted that it satisfied this request through its testimony and exhibits.

The ALJ quoted the May 8 order which stated in full that the Commission "adopts ABATE's request as to the need to continually justify that such fees are truly required and/or are in the interest of ratepayers, and reminds the company of its continuing obligation to identify, describe, and explain projected costs associated with membership fees in future rate cases." PFD, p. 534 (quoting May 8 order, p. 200). The ALJ found that in the May 8 order "the Commission contemplated more than the generic information DTE [Electric] provided to show that dues are 'truly required' or 'in the interest of ratepayers.'" PFD, p. 534. The ALJ stated that given the limited information on this record, she could not identify a specific rate adjustment, but recommended that "the Commission take action to ensure that adequate information is provided in the company's future filings for the parties to evaluate the ratepayer benefits of membership, with an understanding of the cost." *Id*., pp. 534-535.

DTE Electric takes exception to the ALJ's statements that "'the Commission contemplated more than the generic information that DTE [Electric] provided'" on its corporate memberships. DTE Electric's exceptions, p. 200 (quoting PFD, p. 534). DTE Electric also takes exception to the ALJ's recommendation "'that the Commission take action to ensure that adequate information is provided in the company's future filings for the parties to evaluate the ratepayer benefits of membership, with an understanding of the cost.'" DTE Electric's exceptions, p. 200 (quoting PFD, pp. 534-535). DTE Electric agrees with the ALJ's finding that no rate adjustment should be made but disagrees that the company needs to provide more information on corporate membership dues. *See*, DTE Electric's exceptions, p. 200.

The DAAOs take exception to the ALJ's recommendation to the extent that it does not provide a specific disallowance for corporate membership expense. The DAAOs agree with the ALJ's finding that DTE Electric did not identify, describe, or explain its corporate membership costs, as the Commission requested in the May 8 order. The DAAOs assert that "[s]ince the Company has not disclosed the required information, the Commission should reject the costs for all corporate memberships that are not required by law outright." DAAOs' exceptions, p. 12.

The Attorney General replies to DTE Electric's exceptions to support the ALJ's recommendation. The Attorney General states that "[r]equiring the company to provide adequate information on the specific memberships, expenses, and putative customer benefits should be the minimum required of the company, in order to protect ratepayer interests . . . ." Attorney General's replies to exceptions, p. 68.

DTE Electric replies to the DAAOs' exceptions and recounts the benefits the company receives from its corporate memberships. DTE Electric maintains its position that the Commission should adopt the ALJ's recommendation that no rate adjustment should be made. DTE Electric additionally asserts that the Commission should reject the ALJ's suggestion that more information should be provided. *See*, DTE Electric's replies to exceptions, p. 65.

The Commission finds the ALJ's recommendation to be well reasoned and supported by the record and by prior Commission decisions. The Commission directs DTE Electric to file in its future rate cases an exhibit containing an itemized list of projected costs associated with membership fees and justification for why these costs are in customers' interest.

D. Other Expenses

1. Tax Expense

DTE Electric projected its tax expense in Exhibit A-3, Schedule C1.1. The ALJ found that no party took issue with DTE Electric's expected tax calculations for property tax, state and local income tax, or federal income tax. PFD, p. 535. No exceptions were filed on the issue. The Commission therefore adopts DTE Electric's tax expense calculations, updated based on the change in projected revenues and expenses approved in this order.

2. Depreciation and Amortization

The ALJ found that there were no disputes regarding the depreciation rates or amortization periods to apply to rate base or other amortizable expense items. PFD, p. 535. To the extent parties differed regarding depreciation or amortization expense amounts, those issues are addressed above in connection with rate base.

3. Surge Program Regulatory Asset Return

DTE Electric recommended that any future tree trimming surge expenditures "be financed through the issuance of long-term debt and equity until the time the Company can execute a securitization financing for these amounts." 7 Tr 1294. DTE Electric acknowledged that in the May 2 order and May 8 order, the Commission "authorized a return on the tree trim surge regulatory asset at the short-term debt cost rate of 3.56%." 7 Tr 1294 (internal citation omitted). The company explained:

> Given the temporary status, defined in Case No. U-20162, of the Tree Trim Surge regulatory asset, the Company did not pursue financing with permanent long-term debt and equity capital, but rather financed with short-term working capital including short-term debt. Thus, this was matching the financing costs with the return the Company was earning on the regulatory asset. In its order for Case No. U-21015, the Commission considered the regulatory asset to have been financed with permanent capital and specified that proceeds of the securitization should be used for the repayment of long-term debt and equity. Consistent with

> that financing order, any future tree trim surge regulatory asset amounts should be treated as being financed with permanent long-term debt and equity capital and receive the respective return.

7 Tr 1294-1295.

The Staff projected a return on the tree trim regulatory asset of $2,188,000, a decrease of $4,833,000 from the company's filed amount of $7,021,000. 8 Tr 5033; Exhibit A-11, Schedule A1.1, line 6. According to the Staff, it applied the currently approved short-term debt rate of 2.73% while DTE Electric applied the currently approved pre-tax ROR on permanent capital of 8.76%. 8 Tr 5033. The Staff posited that the Commission applied the short-term debt rate to the tree trim regulatory asset to calculate the return in Case Nos. U-20162 and U-20561. The Staff supported using the Commission-approved short-term debt rate to calculate the return on the tree trim regulatory asset "because the circumstances have not changed significantly since the Commission Order approving the tree trim surge . . . ." 8 Tr 5034 (citing May 2 order, p. 80).

The Attorney General opposed DTE Electric's use of the pre-tax permanent cost of capital in calculating the return on tree trimming deferred cost. The Attorney General reasoned that "[t]he use of the pre-tax cost of permanent capital is counter to the Commission['s] previously approved use of the Company's short-term debt rate." 8 Tr 4883. The Attorney General explained that DTE Electric acknowledged that in Case No. U-20162, the Commission authorized DTE Electric to use the short-term debt rate in calculating the return on deferred tree trimming surge costs charged to the regulatory asset. However, the Attorney General noted that DTE Electric argued "that in the recent securitization case for the first portion of the deferred tree trimming surge costs, Case No. U-21015, the Commission determined that the Company had in fact financed the surge costs with permanent capital and not short-term debt." 8 Tr 4883. The Attorney General stated that DTE Electric "interprets that determination in Case No. U-21015 as a change in the

Commission[‘s] directive to now finance the deferred surge costs with permanent capital.” 8 Tr 4833. The Attorney General disagreed with this premise for using permanent capital in calculating the return on tree trimming deferred cost. The Attorney General calculated a revised return based on the short-term debt rate of 1.74% proposed in Exhibit A-14, Schedule D1, of $1,395,000, which is a $5,626,000 reduction in the company’s proposed return and it reduces DTE Electric’s revenue deficiency by the same amount.

The ALJ agreed with the Staff and the Attorney General. The ALJ stated that:

> [t]he Commission previously authorized DTE [Electric] to use the short-term debt rate in calculating the return on deferred tree trimming surge costs charged to the regulatory asset rather than the pretax permanent overall cost of capital proposed by DTE Electric, which the Commission found would be “more appropriate” as it would “reduce overall costs and is expected to be temporary given the company’s plans to file for securitization of the tree trimming regulatory asset.”

PFD, pp. 539-540 (quoting May 2 order, p. 80). The ALJ noted that “DTE [Electric] has the ability to finance those surge costs with short-term debt and make a showing in the next securitization case that it has used short-term debt to finance them during the period that those costs reside in the regulatory asset.” PFD, p. 540. The ALJ recommended that the Commission authorize a return of $1,395,000 based on the short-term debt rate of 1.74% proposed by the Staff and the Attorney General.

DTE Electric takes exception to the ALJ’s recommendation on the return on the tree-trim surge program regulatory asset. DTE Electric argues that “[s]ecuritization remains appropriate to recognize the long-term nature of the program.” DTE Electric’s exceptions, p. 175. Further, the company states that “[r]ecovery over a longer period provides a better matching of costs with anticipated savings, minimizing the cost impact to customers.” *Id*. (internal citation omitted). DTE Electric asserts that “any future tree-trim surge regulatory asset amounts should be treated as being financed with permanent long-term debt and equity, and receive the respective return, until the Company can execute a securitization financing for these amounts." *Id*. (internal citation omitted). The company argues that the Commission should treat the return on the tree trimming regulatory asset as having been financed with permanent capital as it did in DTE Electric's securitization case, Case No. U-21015. DTE Electric maintains its proposed $7.0 million return on the tree trim regulatory asset for the projected test year. *Id*., pp. 175-176 (citing Exhibit A-11, Schedule A1.1).

The Attorney General replies to DTE Electric's exceptions to assert that the Commission should adopt the Attorney General's and ALJ's recommendation "to authorize a return of $1,395,000, based on the short-term debt rate of 1.74%" as proposed by the Staff and the Attorney General. Attorney General's replies to exceptions, p. 58. The Attorney General argues that the Commission has repeatedly authorized DTE Electric to use the short-term debt rate in calculating the return on deferred tree trimming surge costs, rather than the pre-tax permanent overall cost of capital proposed by DTE Electric.

The Commission finds the ALJ's recommendation to be well reasoned and supported by the record. The Commission adopts the Staff's and Attorney General's proposed authorized return of $1,395,000 based on a short-term debt rate of 1.74%.

4. Allowance for Funds Used During Construction

The ALJ found that there was no dispute between the parties regarding the calculation of AFUDC. PFD, p. 540. The differences in this amount are driven by different projected capital expenses, discussed above.

E. Net Operating Income Summary

In summary, the Commission authorizes NOI of $1,083,827,000, in accordance with its above decisions.

VII. REVENUE DEFICIENCY

In accordance with the decisions in this order, the Commission finds that DTE Electric's jurisdictional revenue deficiency for the test year is $30,557,000, computed as follows:

Rate Base	$20,406,679,000
Adjusted Net Operating Income	$1,083,827,000
Overall Rate of Return	5.31%
Required Rate of Return	5.42%
Income Requirements	$1,105,434,000
Income Deficiency	$21,607,000
Revenue Conversion Factor	1.3496
Revenue Deficiency	$29,162,000
Rev. Def. – Tree Trim Surge Program	$1,395,000
Revenue Deficiency – Total	$30,557,000

VIII. OTHER REVENUE-RELATED ITEMS

A. Pilot Programs

The ALJ reported that DTE Electric and other parties to the proceeding proposed a number of pilot programs, some of which have been previously approved by the Commission. Not all fall into the category of revenue-related items and, thus, the Commission addresses them earlier in this order, specifically under Rate Base addressed above. *See*, PFD, pp. 541-594.

Prior to addressing the majority of the individual pilot proposals below, the Commission acknowledges the manner in which DTE Electric has approached the development and implementation of energy-saving technology into the electric grid, including equitable ways to facilitate the use of EVs. That said, the Commission makes clear that each pilot proposal must be well-developed and contain sufficient details so that careful examination will discern whether its costs, means, and goals are clearly defined and consistent with the best practices set forth in the October 29, 2020 order in Case No. U-20645 (October 29 order). As stated in that order, "[t]he Commission's goal is to provide more analytical rigor to the review of utility pilots . . . ." October 29 order, p. 7; *see also*, *id*., pp. 4-5 (citing Pilot report, filing #U-20645-0003, pp. 47-48). Also on this topic, the Commission notes that additional guidance will soon be forthcoming on the Staff's proposed Expedited Pilot Review for Innovative Pilots in Case No. U-20898.

1. Battery Storage–Commercial and Industrial

DTE Electric proposed a new pilot for a limited C&I BTM BESS at a total cost of $2.8 million in capital expenditures. The company proposed that the pilot would be available to only one or two C&I customers who are currently enrolled on Rates D4, D6.2, or D11, excluding Rider 10 customers, and would include battery systems with capacity between 250 kilowatts (kW)/4 hours and 500 kW/8 hours with the customer controlling the system except during a dispatch event (called event) at which time the company would control the system. The company reported that it had conducted a request for information (RFI) and an RFP and, in the interim since the application was filed, had contracted with an equipment provider. The pilot's efficacy will be assessed by comparing the load reduction during called events against expected battery parameters, as well as observing customer peak load reduction for both called events and the customer's use. 7 Tr 1684-1688; *see also*, Exhibit A-12, Schedule B5.6, p. 11, line 3, columns (c)-(f).

The Staff stated its general approval of the BESS concept but protested that the company's proposal lacked specific operational details such as called event notification, battery utilization outside called events, and participation cost, which, on rebuttal, the company denied and argued that the plan was sufficiently developed to move forward. 8 Tr 5382-5383; 7 Tr 1703; *see also*, Staff's initial brief, pp. 95-96; DTE Electric's initial brief, p. 118.

The ALJ recommended that the Commission disallow the proposed funding for the C&I BTM BESS pilot program because DTE Electric did not provide sufficient clarity related to the structural details that the Staff had requested and, accordingly, the overall value of the proposal could not be assessed to the extent necessary for approval. However, the ALJ agreed with the Staff that DTE Electric could resubmit the proposal once sufficient additional details of the pilot are developed. PFD, pp. 543-544 (citing 8 Tr 5383).

DTE Electric excepts to the ALJ's rejection of the C&I BTM BESS pilot proposal. The company argues that it provided many details of the pilot in its initial presentation, including capital costs and the manner in which the program was designed to work, and that additional details were provided in rebuttal. As in its initial presentation, DTE Electric remains puzzled over the additional details the Staff required. Noting the ALJ's comment that the Staff wondered about battery use outside of called events and called event notification, the company points to testimony that explained customers have the option to use the battery outside of called events and will be notified one day in advance of scheduled called events and immediately in the case of an emergency called event. DTE Electric adds that through the course of the pilot, feedback from pilot participants will provide learnings pointing to best practices, such as effective called event notification methods. DTE Electric's exceptions, pp. 122-124 (citing 1685-1686).

The Attorney General replies that the ALJ supported her analysis and conclusion regarding the C&I BTM BESS pilot proposal and that DTE Electric has, again, filed a pilot proposal that is not fully developed and lacks required details. The Attorney General argues that the Commission should reject the proposal. Attorney General's replies to exceptions, pp. 43-44 (citing PFD, pp. 541-544; DTE Electric's exceptions, pp. 122-124).

The Commission finds the ALJ's recommendation well-reasoned and supported by the record. While DTE Electric provided a number of pilot details, i.e., the number of participants it hoped for, the targeted rate class, the total expected investment cost, and battery sizing, among other details, other critical elements of the pilot proposal were not included. For example, information on participation cost, the procedures for event notifications, the effects that called events will have on participants, and an analysis of battery utilization outside of called events would aid the Commission in fully evaluating this proposal. *See*, 8 Tr 5383; Staff's initial brief, p. 96. Lacking these details of the pilot proposal, it is not possible for the Commission to evaluate the potential effectiveness of the pilot and whether it will provide sufficient benefit to ratepayers in relation to the cost. Accordingly, the Commission adopts the ALJ's findings and conclusion on this issue and denies the proposed C&I BTM BESS pilot. *See*, PFD, pp. 543-544; *see also*, 7 Tr 1702-1703; DTE Electric's exceptions, pp. 122-124. However, the Commission acknowledges this pilot is in line with desired learnings, and encourages the company to seek recovery of additional costs in future rate cases when a full explanation of benefits and intended outcomes is presented.

2. Residential Generator

DTE Electric proposed a new pilot designed to implement a residential customer-owned natural gas generator pilot that would utilize telemetry to shift a customer's electric load to the customer's generator in real time during peak events with expected capital expenditures of $0.46 million in the bridge period and test year. The company planned that customers may be offered an incentive to participate in this plan and estimates that, in its service territory, there are about 60,000 residential generators, each with the potential of 5 kW load reduction. The company asserted that the viability of such a program would be evaluated during the pilot, including factors such as its potential use to respond on short term notice to peak events and determining the willingness of customers to actively participate. 7 Tr 1689-1691; *see also*, Exhibit A-12, Schedule B5.6, p. 1, line 3, columns (c)-(f).

The Staff opposed the pilot as being underdeveloped and recommended that the Commission disallow capital expenditures of $183,631 in the bridge period and $235,069 in the test year. 8 Tr 5528.

DTE Electric rebutted that the program is currently much further along, developmentally, than at the time of case filing, in that the company received bids and selected a company to implement a pilot. The company explained that there are 81,000 Generac residential standby generators in the company's service territory with 13,000 currently operational. DTE Electric intends that the pilot will include 100 to 200 customers and that contract execution is planned for the third quarter of 2022. 7 Tr 1702.

The Staff responded that the company's explanations did not resolve all of the Staff's reservations about the program. Staff's initial brief, p. 94.

The ALJ recommended that the Commission reject DTE Electric's residential generator pilot proposal. She indicated that it was not appropriate for the company to communicate details of the program through rebuttal testimony rather than having a fully developed program at the time of the case filing. The ALJ pointed out that, even with the rebuttal testimony, the program presentation lacked essential details such as the estimated cost of the full pilot and the terms of agreement between the company and participating customers, among other important details. PFD, p. 545.

DTE Electric excepts to the ALJ's rejection of the residential generator pilot proposal, arguing that the company provided sufficient information about the pilot in its initial case presentation with added details in rebuttal. DTE Electric avers that the information provided included the proposed capital costs that the ALJ erroneously concluded were missing. DTE Electric reminds the Commission of the company's commitment to the program, states that the program continued to develop during the case pendency and asserts that its efforts should not be dismissed. DTE Electric's exceptions, pp. 120-122 (citing 7 Tr 1689-1691; Exhibit A-12, Schedule B5.6, p. 1, line 3, columns (c) through (f); Staff's initial brief, pp. 94-95; PFD, pp. 545, 593.

The Attorney General replies that she agrees with the ALJ's analysis and rejection of the residential generator pilot. She argues that the program is poorly developed and lacking in essential details such as pilot costs, design, execution, and goals. The Attorney General argues that the ALJ's rejection of this pilot is correct and that the Commission should reject the pilot as well. Attorney General's replies to exceptions, pp. 42-43 (citing DTE Electric's exceptions, pp. 120-122; PFD, pp. 544-545; Attorney General's initial brief, pp. 58-59).

The Commission finds the ALJ's recommendation well-reasoned and supported by the record. Although DTE Electric provided information regarding the residential generator pilot proposal, the pilot is underdeveloped. The Commission finds persuasive the Staff's testimony that there needs to be "a better understanding of the potential for demand savings, proposed control technologies, and incentive structure prior to approving the inclusion of costs for this pilot into rates." 8 Tr 5528. The Commission agrees with the Staff that Consumers' residential generator pilot may provide DTE Electric with learnings that would be advantageous in the further development of this pilot proposal. For these reasons, the Commission adopts the ALJ's findings and conclusion on this issue and denies recovery of the expenditure for the proposed residential generator pilot. *See*, PFD, p. 545; *see also*, 7 Tr 1689-1691, 1702; 8 Tr 5528-5529. However, the company is able to submit reasonable and prudently incurred expenses related to this pilot in future rate cases for Commission review.

3. Residential Window Air Conditioner

DTE Electric estimated that approximately 25% of its customers employ window air conditioners (A/Cs) that could be converted, possibly with company-owned hardware, into Wi-fi-enabled demand response (DR) units, thus expanding the company's DR customer participation. The company proposed a new pilot in which it intends to offer an incentive to customers with window A/Cs that participate and will issue an RFI to assess the feasibility of the proposed pilot program. DTE Electric requested $0.70 million for capital expenditures related to this pilot. 7 Tr 1691-1693; *see also*, Exhibit A-12, Schedule B5.6, p. 1, line 3, columns (c)-(f).

The Staff did not oppose the pilot's concept but opined that it is premature to include costs related to the pilot in the company's rates. The Staff requested that the company provide currently lacking information related to the program's incentive structure, control technologies, and potential DR savings. 8 Tr 5527-5528; *see also*, Staff's initial brief, pp. 93-94.

The ALJ agreed with the Staff that the residential window A/C pilot lacks sufficient development to include related expenditures in DTE Electric's rates at this time and recommended that the Commission disallow this expense. The ALJ pointed out that the company did not provide additional details in rebuttal or briefing in response to the Staff's query. PFD, p. 546.

No exceptions were filed on this issue.

The Commission finds the ALJ's recommendation well-reasoned and supported in the record. As detailed in the February 4 order, the Commission expects that all pilot proposals "that are submitted to the Commission for funding approval [include] a comprehensive pilot plan that includes the objective criteria . . . to be evaluated by the Commission." February 4 order, p. 8. Pilot proposals must be well-developed and contain sufficient details so that careful examination will discern whether its costs, means, and goals are clearly defined and justify the costs involved. As established in the record, the window A/C pilot falls short of this standard. Additional pilot development and details will provide the Commission with needed information to evaluate, not only whether it is of benefit to ratepayers and will further the Commission's and the utility's goals for grid flexibility, reliability, and equity, among others, but also aid the Commission in assessing the company's commitment to the project before permitting the cost of the program to be included in rates. Accordingly, the Commission adopts the ALJ's findings and conclusion on this issue and denies the residential window A/C pilot proposal. PFD, p. 546.

4. Electric Vehicle Pilots (Charging Forward)

The ALJ stated that DTE Electric proposed to modify a number of currently existing components of its Charging Forward pilot and that the parties to the proceeding agreed with many, but not all, of the proposed changes. PFD, p. 547. The Commission notes that the company proposed a number of new pilots, as well. *See*, 7 Tr 2413-2414; *see also*, Exhibit A-12, Schedule B5.9.2. Disputed Charging Forward components are discussed below.

a. Customer Education and Outreach

DTE Electric presented that customer education and outreach (E&O) is needed to educate consumers about the fuel saving benefits of EVs and related company offerings such as TOU rates and charging incentives. As well, the company proposed improvements to its virtual EV showroom tool and explored the development of an EV-specific customer rate selection tool. The company stated that, as an electric power provider, DTE Electric is in an ideal position to conduct a pilot program for this purpose and requested $1.5 million for this pilot ($0.50 million as a regulatory asset and $0.95 million in O&M) to continue this pilot. 7 Tr 2426-2428; *see also,* Exhibit A-12, Schedule B5.9, p. 4, lines 9, 16.

The Staff strongly supported DTE Electric's customer E&O proposal but recommended that the proposal should be funded by third parties such as industry trade groups or the federal government rather than included in rates. 8 Tr 5539. ChargePoint also supported the company's E&O proposal, but only if the program is vendor neutral. ChargePoint emphasized that relying only on certain vendors or products would eliminate the level playing field and skew the competitive market. 8 Tr 4594-4596.

The ALJ recommended that the Commission approve DTE Electric's request for $1.5 million to fund its customer E&O pilot but added that the company is encouraged to explore the availability of third-party funding as recommended by the Staff. The ALJ agreed with ChargePoint that the program should be vendor neutral. PFD, p. 548.

The Commission finds that the ALJ's recommendation is well-reasoned and supported in the record. Accordingly, the Commission adopts the ALJ's findings and conclusions on this issue and approves the customer E&O pilot with the caveats set forth by the ALJ, i.e., that DTE Electric should seek third party funding and ensure the program is vendor neutral. *See*, PFD, p. 548. The Commission notes that the August 23, 2022 order in Case No. U-21227 (August 23 order) encourages utilities to seek available grant funding through the federal Infrastructure Investment and Jobs Act of 2021, and to file biannual updates on June 30 and December 31 in that docket until funding opportunities are closed to applications. August 23 order, p. 18.

b. Residential Rebates

DTE Electric sought $0.4 million, deferred as a regulatory asset, to support the continuation and modification of its $500 residential rebate program for up to a total of 800 qualifying customers.[35] The company also proposed that customers would be able to buy any Level 2 charger rather than purchase a charger from a company-approved list and that any potential loss of data due to non-network chargers could be gathered through AMI, advanced analytics, and EV telematics. 7 Tr 2428-2432; *see also*, Exhibit A-12, Schedule B5.9, p. 4, line 20.

The Staff supported the company's proposal, including the elimination of the company-approved charger list. 8 Tr 5540.

ChargePoint also supported the program, as proposed, with two exceptions: (1) that all chargers be required to have network capability (i.e., require networked chargers) and (2) that all chargers be Energy Star certified and Underwriters Laboratories (UL) approved. 8 Tr 4567, 4569-4574.

DTE Electric agreed with ChargePoint, on rebuttal, that it would require chargers to be Energy Star and UL certified. However, DTE Electric rebutted that network capability is unnecessary, arguing that: (1) networked chargers cost more than non-networked chargers, thus discouraging adoption, (2) relevant information could be obtained through use of vehicle telematics, and (3) customers that participate in the residential charging-as-a-service (CaaS) and residential rebates programs could install a specific outlet that would act as a non-networked charger. 7 Tr 2512-2513.

In rebuttal, the Staff also opposed requiring networked chargers and pointed out that some EVs are, themselves, network capable. The Staff also opined that Energy Star certification may

[35] DTE Electric presented that the company offers additional charging incentives such as a $24 a quarter payment for qualifying residential customers and a builder rebate of as much as $250 for qualifying new construction. 7 Tr 2428.

not provide value when compared with the possibility of decreased customer participation due to the added cost. 8 Tr 5153.

The ALJ recommended that the Commission approve the continuation of DTE Electric's residential rebate proposal with the elimination of the qualified charger list. However, for reasons testified to by the Staff and the company, the ALJ recommended against the adoption of a networked charger requirement. PFD, p. 551.

ChargePoint excepts to the ALJ's rejection of the necessity of networked chargers in the residential rebate program. ChargePoint reiterates its case presentation that networked chargers provide access to information that may not be otherwise available. ChargePoint acknowledged that many autos have network capability but averred that networked chargers would be available regardless of external network capability. ChargePoint's exceptions, p. 3 (citing ChargePoint's initial brief, pp. 2-4; PFD, p. 551; May 2 order, pp. 102-103).

In its replies, DTE Electric reiterates its reasons for opposing the requirement of networked chargers and urges the Commission to adopt the ALJ's recommendation on this matter. DTE Electric's replies to exceptions, pp. 27-28 (citing PFD, p. 551; 7 Tr 2510-2513; ChargePoint's exceptions, p. 3).

In its replies, the Staff argues that the ALJ considered the evidence and made her decision in the Staff's favor; whereas, in its exceptions, ChargePoint merely repeated the points made in its briefing. Accordingly, the Staff states that the Commission should rely on the arguments that the Staff presented in the case, as well as the ALJ's agreement with the Staff and reject ChargePoint's exception. Staff's replies to exceptions, p. 35 (citing ChargePoint's exceptions, p. 3; PFD, pp. 549-551).

The Commission finds the ALJ's recommendations well-reasoned and supported in the record. The Commission notes that DTE Electric agreed to require Energy Star-certified and UL-approved chargers in this pilot. The Staff expressed some concern that the additional cost of Energy Star chargers may inhibit some ratepayers from adopting EV technology but the record does not include a presentation of cost comparisons between Energy Star-certified chargers and non-Energy Star-certified chargers. The Commission finds that, considering the totality of the financial investment in an EV and EV charging infrastructure, the added cost for an Energy Star-certified charger is unlikely to be prohibitive for an energy conscious ratepayer and may, perhaps, provide additional energy-saving motivation for the investment, particularly in light of the potential to receive a $500 rebate. Accordingly, the Commission adopts the ALJ's findings and conclusions on the residential rebate pilot proposal. The Commission also finds the ALJ's consideration of the evidence regarding networked chargers to be well-reasoned and adopts her recommendations on this issue as well.

c. Residential Charging as a Service

DTE Electric requested $2.4 million ($61,000 in O&M and $2.29 million in capital expenditures) to fund its new residential CaaS pilot intended to incentivize the financing and turnkey installation of Level 2 chargers for up to 1,100 residential customers residing in single-family homes. The company proposed that the utility would contract with licensed electricians to perform installation of 240-volt outlets and EV chargers. Individual customers in receipt of an installation would thereafter pay a monthly charge to repay DTE Electric for the cost of the installation, to be added to the customer's electric bill for up to 10 years. 7 Tr 2433-2434; *see also*, Exhibit A-12, Schedule B5.9, p. 4, lines 5, 12.

The Staff opined that DTE Electric's residential CaaS proposal lacked sufficient detail such as the installation fee an electrician would charge, how the electrician would be selected, and how long the electrician would participate in the program. For these reasons, the Staff initially opposed the proposal. 8 Tr 5541. However, in rebuttal, DTE Electric provided the additional details the Staff had requested and the Staff then stated its full support for the residential CaaS program. Staff's initial brief, p. 208.

MNSC generally supported the company's proposal but thought that participants in the residential CaaS program should be required to choose between the company's bring your own charger (BYOC) program and a TOU tariff to ensure that charging times do not strain the grid. 8 Tr 3827.

In rebuttal, DTE Electric responded that, contrary to MNSC's statement otherwise, the company does plan to continue its $500 residential rebate pilot program for qualifying households that install Level 2 chargers. DTE Electric further stated that the company will promote off-peak charging incentives to recipients of CaaS installations and reported that it intends to assess the percentages of customers who participate or decline to do so and evaluate the reasons for said customer participation or lack thereof. 7 Tr 2512.

MNSC clarified that its TOU rate requirement suggestion was based on its opinion that the company must promote off-peak EV charging in order to maximize the ratepayer benefits, not on whether the company discontinued its residential rebate program. MNSC's reply brief, p. 13.

The ALJ recommended that the Commission approve the residential CaaS program and decline, for reasons stated by DTE Electric, to mandate customer choice between the TOU tariff or BYOC program. PFD, p. 553.

No exceptions were filed on this issue.

The Commission agrees with the ALJ's recommendation that the residential CaaS pilot be approved. However, the Commission respectfully disagrees with the ALJ and finds that pilot participants should be assigned to a TOU tariff. While DTE Electric plans to promote off-peak charging through customer incentives with the intention of assessing whether customers take advantage of the incentives and their reasons why or why not, this approach does not go far enough to ensure that program participants are incentivized to utilize off-peak charging. Service received under a TOU tariff will help to balance demand on the grid and ensure that the maximum ratepayer benefit will be realized for this pilot. *See*, PFD, p. 553; 7 Tr 2512; MNSC's reply brief, p. 13.

d. Commercial Make-Ready Rebates

DTE Electric requested roughly $3.9 million ($2.458 million as a regulatory asset and $1.4 million in capital expenditures) to continue and modify its make-ready rebate program for commercial customers. Through the payment of a rebate of $2000[36] to qualifying commercial customers, the program is intended to incentivize the installation of up to 250 individual Level 2 chargers and 50 direct current fast chargers (DCFCs). 7 Tr 2439, 2441; *see also*, Exhibit A-12, Schedule B5.9, p. 4, lines 2, 17.

The Staff supported the make-ready rebate pilot as proposed. 8 Tr 5541.

MNSC asserted that recipients of the make-ready rebates should be required to have infrastructure consistent with use of up to 350 kW DCFCs and that DCFCs should be consistent with a minimum 150 kW charging rate to be in accordance with many new EV models and with

[36] DTE Electric stated that it intends to lower the former make-ready rebate of $2500 to $2000 as the company believes that $2000 is sufficient to cover the cost of a charger installation.

the Federal Highway Administration's (FHA's) national EV infrastructure (NEVI) program guidelines. 8 Tr 3822-3823.

On rebuttal, however, DTE Electric argued that such installations would create excess, often unused, capacity, may be poorly matched to a specific site; and/or would be cost prohibitive. 7 Tr 2519.

EVgo proposed that DTE Electric's make-ready rebate program be expanded at a total cost of $5.85 million and offered that some of the additional funds for the expansion could be achieved by reallocating all of the $1.2 million in commercial CaaS program funding to the make-ready rebate program. 8 Tr 4682-4683. EVgo also proposed that DTE Electric should issue a point-based scoring rubric to inform program applicants of the criteria upon which the company would evaluate their applications, a proposal with which ChargePoint agreed. 8 Tr 4684, 4612-4613.

On rebuttal, DTE Electric agreed with EVgo on the creation and publication of a scoring rubric for program applicants. 7 Tr 2521-2522.

The Staff rebutted EVgo's suggestion regarding the expansion of the commercial make-ready rebate program, stating that the pilot program is intended to introduce the benefits of charger stations to ratepayers and to provide a skeleton network in order to stimulate market expansion of installation of Level 2 chargers and DCFCs. 8 Tr 5154.

EIBC/IEI supported the make-ready rebate program with three exceptions: (1) the Commission should require all DTE Electric's rebate-supported or company-owned charging stations to achieve a 97% charger uptime over a 12-month period, (2) the Commission should require all DTE Electric's rebate-supported or company-owned charging stations to provide annual reports of individual charger's uptimes according to a standard formula which would be shared with the Commission, and (3) recipients of make-ready funding or rebates should be required to sign an agreement that 97% charging uptime would be attained for a minimum of five years as a condition of receiving funding or rebates. EIBC/IEI also asserted that the company should consider requiring EV service equipment suppliers to have monitoring and maintenance agreements in place for each EV charger site and that the current charging status of individual ports be made available online through apps and/or websites. 8 Tr 4387-4391.

Regarding the initiation of the mandatory 97% uptime suggested by EIBC/IEI, DTE Electric rebutted that the company would have great difficulty enforcing such a standard and that network providers and site hosts are financially incentivized by potential revenues from site users to keep the chargers operating and in good repair. 7 Tr 2521. DTE Electric also rebutted that NEVI has not yet officially established its uptime requirements but is expected to do so and that the final uptime requirements may not be set at 97%. Accordingly, DTE Electric argued that it would be better to wait for the NEVI requirements to be released before making a decision. 7 Tr 2520-2521.

In their brief, EIBC/IEI noted that NEVI had released its Notice of Proposed Rulemaking (NOPR) that requested charging uptime requirements be set at 97% but conceded that the proposal was in the initial stages of rulemaking. EIBC/IEI's initial brief, pp. 15-16. DTE Electric responded that the Commission should not base its decision on speculation that the final NEVI rule will set an uptime requirement of 97%. DTE Electric's reply brief, p. 122.

ChargePoint disagreed with both DTE Electric and EIBC/IEI on the 97% uptime requirement, stating that, while ChargePoint supports an uptime requirement, the target uptime suggested by EIBC/IEI was not fully developed. ChargePoint opined that a Commission-directed stakeholder workshop might be an appropriate forum for the development of an evidence-based uptime requirement. ChargePoint also disagreed with EIBC/IEI that charging port status should be made available on apps and websites because such information is already available on ChargePoint apps and other EV charging networks. ChargePoint further opined that contractual maintenance and upkeep requirements would be redundant in light of uptime requirements. Finally, ChargePoint disagreed with MNSC's suggestion that a 150 kW minimum charging rate was necessary and, instead, suggested that 50 kW would be sufficient. 8 Tr 4613-4618.

EVgo agreed with ChargePoint that charging port status maps are already available, such as PlugShare, and are sufficient to inform drivers of the locations of functioning chargers. 8 Tr 4708.

In its briefing, EVgo stated that, although it generally approves of the installation of higher capacity chargers, the installation of minimum 150 kW chargers is unnecessary, pointing out that 97% of best-selling EVs in the year 2021 were 100 kW capable. Further, EVgo stated that 150 kW may, perhaps, shrink the EV market because low-income EV purchasers tend to choose EVs with smaller batteries that are 100 kW capable. EVgo's initial brief, pp. 10-11. In rebuttal testimony, EVgo opined that, rather than requiring a minimum charger capability, a map/scoring rubric could be developed that assigns higher scores to chargers with higher charging capacity. EVgo asserted that such a process would neither promote nor inhibit installation of higher capacity chargers. 8 Tr 4710.

The ALJ stated that she agreed with the Staff and recommended that the Commission approve the continuation and modification of the commercial make-ready rebate program as proposed by DTE Electric. The ALJ declined to adopt the following proposals: (1) a 350 kW minimum infrastructure capacity, (2) a 150 kW charging rate, (3) elimination of DTE Electric's commercial CaaS pilot and reallocation of commercial CaaS funding into the make-ready rebate program, (4) a 97% charger uptime requirement, (5) a requirement that make-ready funded and company-owned charging stations provide charging station status reports, and (6) that charging site owners be required to contract with EV service equipment suppliers for maintenance and upkeep. PFD, pp. 560-562.

The ALJ explained that she declined to adopt the minimum 150 kW charging infrastructure capacity and minimum charging rate for the reasons stated by DTE Electric, EVgo, and ChargePoint. Regarding the proposed elimination of the commercial CaaS pilot program, the ALJ reasoned that commercial customers have not significantly participated in Charging Forward programs and that the commercial CaaS is a path towards greater participation from this community. The ALJ further reasoned that the time is not ripe for adoption of a 97% uptime requirement and that it would be prudent to await the adoption of the final rule by NEVI. Regarding charger status reporting, the ALJ cited the reasons against the proposal testified to by EVgo and ChargePoint as being persuasive. Finally, the ALJ opined that maintenance and service of charging sites should be within the purview of the site owners and that doing otherwise may benefit EV service equipment suppliers at the expense of others that are also able to provide these services. *Id*.

In its exceptions, EVgo acknowledges that DTE Electric agreed to create and publish, within 30 days of the approval of the make-ready rebate pilot, a scoring rubric to be shared with make ready rebates applicants; however, EVgo argues that the Commission should mandate that DTE Electric collaborate with stakeholders in developing the rubric. EVgo's exceptions, pp. 3-4 (citing PFD, pp. 555-556, 560; 8 Tr 4684-4686; EVgo's initial brief, pp. 7-8).

EIBC/IEI except to the ALJ's failure to recommend adoption of a 97% uptime for EV chargers and reiterated its case presentation and arguments. Additionally, EIBC/IEI argue that, should the Commission decline to mandate a 97% standard, it should implement, within 90 days of the effective date, the standard set forth in NEVI when that rulemaking is finalized. Finally, EIBC/IEI argue that requiring maintenance agreements for chargers would ensure that site hosts remain in compliance with reliability standards. EIBC/IEI's exceptions, pp. 4-8 (citing PFD, pp. 556, 561; 8 Tr 4383-4386; 7 Tr 2439-2440.

The Commission finds the ALJ's recommendations to be well-reasoned and supported in the record. Accordingly, the Commission adopts the ALJ's findings and conclusions on these issues and approves the commercial make-ready pilot proposal as described by DTE Electric—with the exception of the ALJ's recommendation to reject a 97% uptime requirement. The Commission notes that the company's commercial make-ready rebate pilot includes establishment of a minimum 50 kW charger requirement. *See*, PFD, p. 560; 7 Tr 2519-2520.

The Commission supports a 97% charger uptime requirement for EV chargers purchased with the aid of company rebates funded by ratepayers. If charger availability is limited due to operational downtime, EV use will be disincentivized, the millions of dollars (approximately $4.0 million in this rate case and more over time) invested in infrastructure to support EV use and EV charging will be ill-spent, and program goals will not be realized. Further, it has not been evaluated whether the income earned from charging fees provides sufficient incentive to assure that charger owners will maintain functioning chargers at a standard that EV users require. Therefore, the Commission adopts a 97% charger uptime for participants in this pilot as is currently proposed by the Federal Highway Administration's (FHA's) NEVI program guidelines. Should the FHA ultimately revise or update its guidance on uptime requirements upon issuance of the final NEVI rule, the Commission would then be open to revisiting these guidelines and reserves the right to modify this charger uptime requirement to maintain consistency with federal guidelines.

e. Charging Hubs

DTE Electric requested about $2.8 million ($40,000 for O&M and $2.8 million for capital expenses) to fund the company's new pilot proposal to install, operate, and maintain two medium-duty (MD) and heavy-duty (HD) charging hubs powered by approximately 12 DCFCs owned by the company. The company asserted that the charging hubs would serve multiple customers of both fleet and light-duty passenger EVs and opined that the program would encourage fleet owners to pursue EVs and provide key learnings to the company. DTE Electric stated that the charge for using the hub would be based on the cost to the company to serve the charging hub plus a per session charge to partially offset the company's initial capital investment. 7 Tr 2442-2445; *see also*, Exhibit A-12, Schedule B5.9, p. 4, lines 4, 11.

The Staff indicated its support of DTE Electric's charging hub proposal and stated that it expected to collaborate with the company on the project. 8 Tr 5529, 5542. ITC also indicated that it expected to collaborate with DTE Electric on at least one charging hub location. 8 Tr 4625-4626.

ChargePoint argued that DTE Electric is a monopoly utility and utility-owned charging hubs could result in the company charging non-competitive rates thereby discouraging market competition and possibly causing ratepayers to have added costs, both for installation and, perhaps, to cover charging hub maintenance and charging costs not covered by the fees assessed to users of the hubs. EVgo opined that utility companies and the private sector should be partners in EV charging station deployment and indicated that private parties could, with DTE Electric's input, competently install and manage charging hubs that are cost-efficient. 8 Tr 4584-4589.

EVgo supported the development of charging hubs but opposed the company-owned charging hub pilot as being unfairly competitive with the private sector and argued that providing third-party rebates to incentivize private companies to install charging hubs would be far cheaper ($760,000) as opposed to the cost of DTE Electric-owned charging hubs ($2.8 million). Further, EVgo argued that third parties were capable of siting the hubs if provided with key information from DTE Electric. 8 Tr 4691-4693, 4695-4696; *see also*, EVG-4 (DTE Electric's response to data request EVGDE-1.3).

GLREA argued that DTE Electric-owned charging hubs would unfairly compete with the private sector and that private-sector companies are capable of siting charging hubs. 8 Tr 3249.

MNSC questioned DTE Electric's claim that the company was uniquely positioned to institute this pilot and pointed out that the company failed to identify any charging site hubs in discovery. MNSC urged the Commission to require DTE Electric to provide appropriate grid information in order to facilitate the development of charging hubs by private companies. 8 Tr 3828.

On rebuttal, DTE Electric disagreed with EVgo that it would be appropriate to replace its company-owned charging hub proposal with a rebate program and stated that, through the company-owned charging hub program, DTE Electric would gain knowledge that cannot be attained through any other source. DTE Electric also argued that, although the company has offered make-ready rebates for several years, no third party has proposed to install the type of charging infrastructure (fleet MD and HD) that will be included in the proposed company-owned charging hub program. Additionally, DTE Electric pointed out that the implementation of this pilot would enable the company to access specific federal funding and would enable the company to add to its eFleets Advisory Service. Further, DTE Electric denied that the charging hub pilot would compete with the private sector because the rate charged for the use of the hub would be high enough to disincentivize light-duty EV drivers. 7 Tr 2515-2516, 2518. Finally, DTE Electric asserted that providing updated information to third parties regarding capacity may be misleading to developers and costly for ratepayers. 4 Tr 534-535.

The Staff rebutted that the unfair competition claims offered by ChargePoint and EVgo were without merit in that only two charging hubs would be included in the pilot and those two hubs would provide needed and currently unavailable MD and HD EV data to the company related to its distribution and transmission system. 8 Tr 5549-5550.

ChargePoint rebutted that DTE Electric could obtain the desired information through a rebate program or a partnership with a private company. 8 Tr 4608-4609.

EVgo rebutted that ITC failed to provide any meaningful information related to its collaboration with DTE Electric on the charging hub program thus suggesting that ITC has not fully explored the proposed program. 8 Tr 4702-4703.

MNSC recommended two potential resolutions to the issues related to charging hubs: (1) approve the pilot as a piloting concept or (2) employ an RFP (as suggested by EVgo) and rely on the responses to develop two pilot charging hubs. MNSC also recommended that the Commission require DTE Electric to provide distribution capacity information to prospective developers and hosts of EV charging infrastructure. 8 Tr 4114-H.[37]

Zeco did not provide direct testimony on DTE Electric's charging hub proposal but did provide rebuttal to ChargePoint's and EVgo's concerns, stating that the charging hub pilot, as proposed by DTE Electric, would not be deleterious to the development of charging hubs by the private sector. Zeco argued that, in fact, the pilot would stimulate private sector growth, and advocated an expedited schedule for the pilot. 8 Tr 4728-4729.

[37] Some pages of the transcript are numbered with an added hyphen and letter.

In their reply briefs, ChargePoint and EVgo continued their opposition to the charging hub pilot program, with ChargePoint stating that DTE Electric, itself, is at fault for the lack of fleet charging stations because the company's make-ready rebate turned down projects that would necessitate larger investments. EVgo agreed, stating that the company did not consult with third parties regarding their willingness to invest in fleet-charging hubs. ChargePoint and EVgo restated their preference for a rebate program over a company-owned charging hub program. ChargePoint's reply brief, p. 2; EVgo's reply brief, p. 3.

The ALJ recommended that the Commission approve DTE Electric's charging hub proposal but with the company's investment limited to two charging hubs and providing that expansion of the program be scrutinized before proceeding. The ALJ shared concerns that the parties raised related to company-owned charging hubs being deleterious to private investment and a competitive market but thought that these concerns were relevant only to large-scale deployment of company-owned charging hubs. Even so, the ALJ recommended that the Commission require DTE Electric to provide third parties with capacity information related to the siting and deployment of charging hubs, including "additional information like load serving capacity at substation and circuit levels, feeder identification and characteristics, substation source, voltage information, and other 'last mile' grid information," so that private investment may be facilitated. PFD, pp. 568-569.

DTE Electric excepts to the ALJ's recommendation that the company provide third parties with capacity information related to siting and deployment of charging hubs and argues that this suggestion exceeds the proposals by the parties to the case. The company asserts that the hosting map it created was intended to provide a guide to the development of DERs and that being held responsible for providing accurate updated maps that include EV hosting capacity would require business process changes and significant investment in IT infrastructure for the purpose of serving narrow private sector third-party interests. DTE Electric's exceptions, pp. 153-154.

ChargePoint excepts to the ALJ's recommended approval of DTE Electric's charging hub pilot proposal. ChargePoint reiterates its case presentation repeating arguments that DTE Electric-owned charging hubs interfere with the competitive market to the extent that only less efficient and less attractive siting would be available to private investors. ChargePoint's exceptions, pp. 1-2.

In its exceptions, EVgo proposed that the Commission direct DTE Electric to limit the company's charging hubs to HD and MD fleet charging thereby avoiding the risk of interfering with the competitive market. EVgo also requested that the Commission direct DTE Electric to collaborate with stakeholders to prepare updated hosting capacity maps and release a map within six months of the Commission's final order in the instant case, with opportunity for feedback from stakeholders. EVgo's exceptions, pp. 4-7.

The Attorney General replies that she agrees with the ALJ's recommendation on the charging hub proposal that DTE Electric be required to provide updated capacity maps to third parties. Attorney General's replies to exceptions, pp. 52-53.

ChargePoint replies that the Commission should require DTE Electric to prepare updated capacity hosting maps in order to facilitate the siting of third-party chargers as the company raised nothing new in its exceptions to counter the ALJ's well-reasoned recommendation. ChargePoint also points out that DTE Electric could look to other utilities for information related to preparing and updating its mapping. ChargePoint further argues that DTE Electric has monopolistic access to grid information that should not be used to stifle private sector competition. ChargePoint's replies to exceptions, pp. 1-2 (citing DTE Electric's exceptions, p. 153; PFD, p. 569; ChargePoint's initial brief, p. 9).

EVgo replies that the Commission should ignore DTE Electric's statement that updated capacity maps are challenging to prepare because "load is dynamic and load maps are quickly outdated." EVgo's replies to exceptions, p. 3 (quoting DTE Electric's exceptions, p. 153). EVgo points out that other jurisdictions have created such maps and could learn from those utilities. EVgo's replies to exceptions, p. 3.

EVgo, in its replies, also repeats its position that DTE Electric's building and ownership of charging hubs is deleterious to the private sector competitive market and, as well, repeats its suggestion that, if the Commission approves the charging hub pilot, it should limit the hubs to MD and HD fleet charging. EVgo's replies to exceptions, p. 4 (citing EVgo's exceptions, p. 5; ChargePoint's exceptions, p. 2; PFD, p. 568).

EIBC/IEI reply that, contrary to the argument by DTE Electric, the Commission does have authority, under MCL 460.554(1)[38] to require the company to provide updated capacity mapping. EIBC/IEI point out that the Commission has recently ordered utilities to share information related to their distribution systems so that opportunities for grid improvement may be identified and that the Commission found that "hosting capacity maps of utilities in other jurisdictions [are] models to emulate." EIBC/IEI's replies to exceptions, p. 3 (quoting September 8 order, p. 67) Additionally,

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[38] MCL 460.554(1) states:

> If required by the commission, an electric utility erecting lines to transmit electricity in or through the highways, streets, or public places of 1 or more counties of this state shall prepare and file with the commission data and information concerning the method and manner of the construction of those lines, the franchise or consent under which those lines were constructed or are being maintained, and other information the commission reasonably requires.

EIBC/IEI argue that such mapping is beneficial to ratepayers in that siting of EV infrastructure may be facilitated where grid improvements may be least extensive. EIBC/IEI's replies to exceptions, pp. 2-3 (quoting PFD, pp. 568-569, referencing DTE Electric's exceptions, pp. 153-154, n. 101).

The Commission, though reluctant to allow distribution utilities such as DTE Electric to enter the competitive EV charging market, finds the ALJ's recommendations to be well-reasoned and supported in the record. Accordingly, the Commission adopts the ALJ's findings and conclusions on this issue and approves the charging hubs pilot. However, approval of the limited charging hub pilot should not be viewed as an alternative to the company playing a more active role in facilitating the development of third-party owned charging hubs, and the Commission urges the company's continued collaboration with the Staff and third parties to further the public's ability to access and analyze distribution system capacity data. Therefore, the Commission encourages the company to refer to the Commission's directives on hosting capacity maps set forth in the September 8 order, where the Commission states that it is appropriate to seek information on utilities' distribution systems and "to look at Michigan utilities' HCA [hosting capacity analysis] go/no-go maps and improvements that can be made by using the distribution system data and hosting capacity maps of utilities in other jurisdictions as models to emulate." September 8 order, p. 67. The Commission urges the company's continued cooperation with the Staff and stakeholders through the Distribution System Data Access workgroup to improve the company's existing capacity maps. As noted by intervenors in this case, improvements should include, along with hosting capacity data for DERs, the inclusion of load serving capacity data which can be of particular use to the developers of EV charging infrastructure. The company should also incorporate best practices from industry peers in terms of the level of granularity, accessibility, exportability, and data refresh rates.

f. Transit Batteries/Electric Bus Batteries

DTE Electric presented that the company would like to incentivize transit agencies to purchase electric buses (eBuses) through its newly proposed transit batteries/eBus batteries pilot program and requested $0.4 million in capital expenditures to fund one eBus and to cover the cost of data collection and analysis for that eBus. DTE Electric intends that when a transit agency purchases an eBus from the manufacturer, the price of the battery for that eBus would be discounted with DTE Electric covering the battery cost. DTE Electric would then own the battery and collect data on charging patterns and other relevant matters, but the transit agency would pay a monthly fee under DTE Electric's proposed eBus tariff, Rider 21, so that DTE Electric could recover the cost of the battery. Once the transit agency has paid in full for the battery, DTE Electric would no longer own the battery. The eBus tariff is based on Energy Efficiency Institute's (EEI's) Pay as You Save (PAYS) model which was developed to help minimize costs that may inhibit use of beneficial technologies. DTE Electric asserts that, initially, the cost of the pilot would be funded through rates, but eventually, would be rate-neutral due to revenues from both the monthly transit agency fee and overnight depot charging. 7 Tr 2446-2447, 2449; *see also*, Exhibit 12, Schedule B5.9, p. 4, line 6.

The Staff supported the transit batteries/eBus batteries pilot program as proposed by DTE Electric. 8 Tr 5542. MNSC also supported DTE Electric's proposal. 8 Tr 3829. However, while the CEOs supported the PAYS model for the eBus tariff, they would like to see the program expanded to cover four or five additional transit buses and to include school buses. The CEOs contended that funding up to four or five buses would remain rate-neutral for reasons stated by

DTE Electric and would provide more learnings upon which to base future business decisions. 8 Tr 3558-3559.

While not specifically opposing the transit batteries/eBus batteries pilot, GLREA asserted that services provided by third parties are typically less expensive than assets owned by the company. 8 Tr 3284.

On rebuttal, DTE Electric stated that, as suggested by the CEOs, the company is interested in expanding the program to cover more buses because transit agencies that purchase an eBus will pay back the company for the costs of the eBus battery and those agencies may be eligible for federal grants. DTE Electric also expressed interest in expanding the program to include school buses. 7 Tr 2523-2524.

The ALJ recommended approval and expansion of the transit batteries/eBus batteries pilot program to include more transit buses and school buses. While acknowledging GLREA's reasons for opposing company-ownership of assets, the ALJ pointed out that the program is intended to be rate-neutral and the transit company would be the owner of the battery once it repays DTE Electric for the upfront cost. PFD, p. 571.

The Commission finds the ALJ's recommendations well-reasoned and supported in the record. Accordingly, the Commission approves the transit battery/eBus batteries pilot. *See*, PFD, p. 571. The Commission further approves expansion of the pilot to include the purchase of four additional transit batteries/eBus batteries, for a total of five, as proposed by the CEOs and as accepted by DTE Electric on rebuttal. 8 Tr 3559, 7 Tr 2523. The program should be designed to maximize the opportunity for additional external funding from the FTA or other grants. The company has indicated that the pilot is rate neutral so expansion to include the additional purchases will not increase rates for non-participating customers over time. The Commission also encourages DTE

Electric to submit, in its next rate case, a proposal for the expansion of the transit battery/eBus batteries pilot that provides an opportunity for school districts to utilize this program to expand electrified school bus fleets.

g. Transportation Network Company Driver Rebates

DTE Electric requested $0.5 million in O&M to fund its new pilot program to provide $5,000 rebates for up to 100 qualifying drivers for transportation network companies (TNCs) as a way to enable equitable access to EVs and to educate TNC/EV passengers. DTE Electric presented research shows that TNC drivers are more likely than other drivers to transport populations that are underrepresented in EV ownership and posits that the TNC driver rebate program could educate and familiarize that population with EV operation while also improving air quality. 7 Tr 2456-2458; *see also*, Exhibit A-12, Schedule B5.9, p. 4, line 10.

The Staff supported DTE Electric's proposal for TNC driver rebates but added two contingencies: (1) the company should provide program details in yearly EV stakeholder reports and (2) the company should discuss the program with and report routinely to the Commission's Low-Income Workgroup and Energy Affordability and Access Collaborative. 8 Tr 5544. In rebuttal, the company agreed to both of the Staff's suggestions and, subsequently, the Staff gave the program its full support. 7 Tr 2514; Staff's initial brief, pp. 213-214.

MNSC expressed its general support for the TNC driver rebate program but opined that it would be more effective if it were available at point-of-sale. 8 Tr 3829-3830.

The ALJ recommended that the Commission approve the TNC driver rebate program with the inclusion of the Staff's reporting requirements. She also recommended that DTE Electric look into the feasibility of making the rebates available at point-of-sale as suggested by MNSC. PFD, p. 573.

The Commission respectfully disagrees with the ALJ and rejects the TNC driver rebate pilot. *See*, PFD, p. 573. The Commission appreciates the company's efforts to explore ways to broaden equitable access to EVs, but the Commission is concerned about the program's lack of income or other eligibility or verification measures that could prevent or limit the misuse of these rebates. The Commission is hesitant to permit costs to be included in rates for pilots that are not fully developed or for pilot proposals that lack supporting details of how all aspects of the proposal are intended to operate. To do so would place the goals of the proposal at risk of being unrealized, thus jeopardizing ratepayer resources.

h. Income-Eligible Rebates

DTE Electric requested $1.917 million in regulatory assets to fund its newly proposed income-eligible rebate pilot intended to provide up to 1,300 qualifying low-income households with a $1,500 rebate for the purchase or lease of a new or used EV costing $50,000 or less. The company plans to establish qualifying parameters such as limiting rebate eligibility to households with income under 400% of the federal poverty level, households that participate in an income-eligible governmental program such as food assistance, or households that participate in DTE Electric's income-eligible assistance programs. The company also proposed to off-set the cost of the rebates by creating a methodology for the public to make voluntary donations to the income-eligible rebate program such as in the Michigan Green Power (MIGP) low-income donation pilot approved by the June 9, 2021 order in Case Nos. U-20713 *et al*. (June 9 order). 7 Tr 2459-2460, 2462-2463; *see also*, Exhibit A-12, Schedule B.59, p. 4, line 19; *see also*, June 9 order, p. 44.

The Staff generally supported the proposal but opined that it appeared to be underdeveloped. The Staff recommended that the company be required to provide an account of the program in the annual EV stakeholder update report and to engage in periodic check-ins with the Commission's

Low-Income Workgroup and Energy Affordability and Access Collaborative, as with the TNC driver rebate program. 8 Tr 5544.

MNSC proposed that DTE Electric should make the vehicle rebates available at point-of-sale but faulted the company for its proposed investment of $1.3 million in IT for the purpose of receiving on-line donations.[39] MNSC pointed out that there are platforms in existence that are capable of accepting such donations and advised that the Commission should direct the company to fund the program without depending on donations to cover costs. 8 Tr 3829-3830.

DTE Electric rebutted MNSC that the company had designed the program without reliance on donations but believed that seeking voluntary donations was appropriate. DTE Electric rebutted the Staff's concerns, stating that the company is examining whether donations could be received through collections taking place on a monthly or one-time basis or, perhaps, permitting recipients of non-income eligible rebates to donate a portion of their rebate to the income eligible rebate program. DTE Electric further rebutted that the company was agreeable to the Staff's reporting suggestions. In its initial brief, the Staff stated that the company's explanations and agreement with reporting requirements allayed its reservations to the program and that the Staff now fully supports the program. 7 Tr 2513-2514; DTE Electric's initial brief, p. 150; Staff's initial brief, p. 215.

The ALJ recommended that the Commission approve the income-eligible rebate pilot with the reporting requirements suggested by the Staff and also recommended that DTE Electric look into making rebates available at point-of-sale. The ALJ noted that, as stated by MNSC, the company's proposed investment of $1.3 million in IT (for the MIGreenPower Low-Income Donation Pilot), to accept voluntary donations of $1.9 million seems "incongruous." PFD, p. 576.

[39] MNSC referred to the MIGreenPower Low-Income Donation Pilot.

No exceptions were filed on this issue.

The Commission finds the ALJ's recommendation well-reasoned and supported in the record. Accordingly, the Commission adopts the ALJ's findings and conclusions and approves the income-eligible rebate pilot proposal. *See*, PFD, p. 576. The Commission encourages the company to ensure that the targeted population has ready access to pilot information and funds, including making rebates available at point-of-sale, so that the pilot funds may be fully deployed and pilot goals realized to the fullest extent possible.

i. Commercial Charging as a Service

DTE Electric requested $1.2 million ($0.681 million regulatory asset and $0.49 million in capital expenditures) to fund its newly proposed commercial CaaS program to serve four qualifying customer groups: (1) rural areas, (2) municipalities, (3) multi-unit dwellings (MUDs), and (4) environmental justice communities (EJCs). The company expects to install up to 150 Level 2 ports and four DCFCs that site hosts would own and operate, paying a monthly fee to DTE Electric, with DTE Electric funding and owning electrical infrastructure leading to the chargers. The company stated that the program is intended to incentivize communities that are under-represented in Charging Forward pilot programs or that have little access to EV chargers. 7 Tr 2463-2465; *see also*, Exhibit A-12, Schedule B5.9, p. 4, lines 3, 18.

The Staff supported the company's proposal but recommended the same communication and reporting requirements that were recommended for the TNC driver rebate program. 8 Tr 5544.

While supporting the installation of Level 2 chargers and DCFCs, EVgo questioned whether the company should install the chargers and suggested the company reallocate the commercial CaaS program funding to the make-ready program. 8 Tr 4688-4689. ChargePoint asserted that the technical requirements of the commercial CaaS program should be aligned with the

requirements for the residential CaaS program. ChargePoint also suggested that the program parameters be modified to allow for private sector turnkey installations.
8 Tr 4688-4689, 4592-4593.

DTE Electric rebutted that it agreed to the Staff's reporting and communication requirement and declined EVgo's suggestion that the commercial CaaS program is unnecessary, stating that the populations targeted by the commercial CaaS program are under-represented in make-ready rebate programs and other Charging Forward programs. 7 Tr 2514, 2523.

The ALJ recommended that the Commission approve the commercial CaaS proposal with the communication and reporting requirements suggested by the Staff, as well as including the technical requirements as were accepted by DTE Electric in the make-ready rebate program. PFD, p. 578.

The ALJ was not persuaded by EVgo's suggestion that the commercial CaaS program be scrapped and funds reallocated to the make-ready rebate program. The ALJ opined that the commercial CaaS pilot would reasonably achieve the company's goals of increased equitable access to EVs and, as the company pointed out, the targeted communities would benefit, having a record of low participation in Charging Forward and make-ready rebate programs. The ALJ also was not persuaded to require the addition of third-party turn-key solutions, stating that companies that offer a similar service as would be pursued in the commercial CaaS pilot would do well to promote their programs to potential site hosts. PFD, pp. 578-579 (citing 7 Tr 2467).

No exceptions were filed on this issue.

While again expressing some concern at DTE Electric's proposed participation in the competitive EV charging market, the Commission again finds the ALJ's recommendations to be well-reasoned and supported in the record in this case. Accordingly, the Commission adopts the

ALJ's findings and conclusions on this issue and approves the commercial CaaS pilot proposal. *See*, PFD, pp. 578-579. For future investments of this type, the Commission will expect to see continued support for why the distribution utility itself needs to be involved in charger installation, as opposed to the make-ready approach that encourages continued development of a competitive EV charging landscape.

j. Emerging Technology Fund

DTE Electric requested $0.9 million as a regulatory asset to fund a newly proposed pilot directed toward the testing of new EV technologies. The company stated that it would create an advisory committee made up of experts external to the company but including DTE Electric's own experts as well. 8 Tr 2468-2470; *see also*, Exhibit A-12, Schedule B5.9, p. 4, line 23.

The Staff supported the emerging technology fund provided that: (1) a Commission Staff member would be included, ex-officio, in the advisory committee, (2) that regular meetings be held with the Staff, and (3) that the company would document the program's costs, results, and benefits. 8 Tr 5545; *see also*, Staff's initial brief, p. 215.

The ALJ recommended that the Commission approve the program contingent upon the Staff's requirement that the company select a Staff member to sit, ex officio, on the committee, that the company hold regular meetings with the Staff, and the company document the program's costs, results, and benefits. PFD, p. 580.

No exceptions were filed on this issue.

The Commission finds the ALJ's recommendations to be well-reasoned and supported in the record. Accordingly, the Commission adopts the ALJ's findings and conclusions on this issue and approves the emerging technology fund pilot proposal, conditioned on the inclusion of the three caveats suggested by the Staff. *See*, PFD, p. 580.

k. Future Charging Forward Program Full-Scale Proposal

Without providing a timeline, DTE Electric asserted that, due to the swiftly evolving EV market and in order to advance off-peak charging, the company will soon propose a full-scale Charging Forward program. The company desires to refine existing pilots and test expansion of newly proposed elements before developing pilots into long-term programs. 7 Tr 2471-2472.

The Staff asserted that, within 18 months of the order in the instant case and in a separate docket, the company should file a final Charging Forward plan that includes a rigorous BCA. 8 Tr 5545.

MNSC asserted that DTE Electric's proposal was not sufficient to meet the company's service territory EV charging infrastructure needs through the year 2025. MNSC offered that the company should be directed to develop a full-scale program by March 15, 2023, and suggested that DTE Electric file information about EV adoption's net effects, including a minimum of seven reporting requirements, in future rate cases. 8 Tr 3823, 3836, 3840; *see also*, PFD, p. 581, nn. 1908 and 1909 (citing 8 Tr 3837-3840).

EIBC/IEI stated their belief that, in the near future, EV adoption rates will be greater than expected by the company. EIBC/IEI recommended that, by the filing of its next rate case, the company should move away from EV charging pilot projects and move toward adding EV charging infrastructure into its regular budget and revenue recovery. EIBC/IEI supported the inclusion in rate cases and sales forecasts of the net effects of EV adoption and charging, and, in rate cases, the inclusion of a minimum of seven reporting components similar to those suggested by MNSC. EIBC/IEI also suggested that DTE Electric develop a program, without limits to the number of recipients or timeframes, to provide rebates for EV charging infrastructure. 8 Tr 4379, 4381-4383; *see also*, PFD, p. 582, n. 1911 (citing 8 Tr 4380-4381).

DTE Electric rebutted that the numerous components of its Charging Forward plan are in varying stages of maturity making the development of a full Charging Forward plan impossible in the short time frames suggested by the Staff and MNSC. However, the company proffered that, beginning with the next rate case, it could begin such a process. DTE Electric also stated that the company needs to maximize its eligibility for state and federal grant programs and that requiring a rigorous BCA as a condition of pilot approval would put an end to its transition to permanent offerings. 7 Tr 2506.

Regarding MNSC's and EIBC/IEI's suggestions of a minimum of seven reporting requirements, DTE Electric argued that all but one (suggestion (1) number of EVs in DTE Electric's service territory by class) were neither technically nor practically possible and that the analysis requested by EIBC/IEI required such extensive speculation that the results would not possibly be accurate. Further, the company asserted that EV adoption rates and charging use forecasts were already included in the company's sales forecast. 7 Tr 2507, 2510.

The Staff opposed MNSC's and EIBC/IEI's suggestions for the structure of future EV proposals, arguing: (1) that their suggestions favored EV owners at the expense of non-EV ratepayers and (2) they failed to satisfactorily include costs when calculating EV's net benefit. 8 Tr 5155.

The Staff also stated that some parties overemphasize the extent of a utility's responsibility to install EV infrastructure, and accordingly, the extent of the responsibility of electric customers. The Staff offered that, perhaps, the Commission might consider rate dilution in response to EV charging revenue increases and that residential customers should not be offered distribution system upgrades without themselves providing some CIAC for installations that exceed 40 amps or involve the installation of multiple chargers. 8 Tr 5510-FJ.

The Staff, on rebuttal, added new reporting criteria to MNSC's and EIBC/IEI's suggested seven criteria: (1) residential rate schedules should be further divided into level 1/Level 2 chargers, (2) C&I rate schedules should be further divided into Level 2/DCFC, and (3) "[t]he revenue impacts of the demand charge holiday should be addressed, including charging customers on rate D3 that may be moved to rate D4 or another rate after June 1, 2024." 8 Tr 5510-I.

In brief, DTE Electric repeated the company's opposition to filing a final plan and reiterated the company's offer to introduce permanent programs individually. DTE Electric's initial brief, p. 149. The Staff considered DTE Electric's argument that its pilot programs were in varying stages of maturity and suggested that the company examine each program for potential graduation to permanent status and provide the company's rationale for its decision, as well as provide information about all of its pilot programs in the company's next rate case. Staff's initial brief, p. 217. EIBC/IEI reiterated that the Commission should require DTE Electric to convert its entire Charging Forward program to permanent status in its next general rate case consistent with the Commission's December 22 order. EIBC/IEI's initial brief, pp. 4-5; *see*, December 22 order, pp. 311-312. MNSC reiterated that the company be required to convert all Charging Forward pilots into a permanent EV plan in its next general rate case. MNSC's initial brief, p. 152.

DTE Electric responded to the Staff that the company cannot provide the information regarding Level 1/Level 2 chargers and DCFCs and proffered that rate D3 does not have a demand component. DTE Electric's reply brief, p. 118.

EIBC/IEI replied that the Staff asserted that utility investment is limited to constructing a skeleton network as opposed to meeting demand for EV infrastructure and that the Staff's position is contrary to the Commission's goal of accelerating DTE Electric's pilot programs to permanent programs so as to better support EV expansion. EIBC/IEI argued that the Commission should approve programs that are designed to meet all EV demand. EIBC/IEI's reply brief, pp. 5-6 (citing December 22 order, pp. 311-312).

MNSC replied in brief that it agrees with the Staff that permanent EV proposals should provide a net benefit to ratepayers, that CIAC for EV charging should be limited to certain installations, and that reinvestment of EV charging revenues should be used to increase EV adoption. MNSC also stated that the best option may be to address these issues in a future general rate case. MNSC's reply brief, pp. 16-17.

The ALJ recommended that the Commission direct DTE Electric to include a permanent plan for its current Charging Forward pilots in its next general rate case. The ALJ was not persuaded that the company's pre-existing pilots are not well-developed enough to transition to being elements of a permanent program. However, she conceded that should that be the case, the company could submit its reasons and a proposal for a different timeline with the next rate case for the Commission's consideration. PFD, p. 587. The ALJ was also not persuaded that DTE Electric could not provide a BCA and opined that such a document is essential to evaluating the net benefit of proposals. The ALJ recommended that the Commission require the company to submit a BCA with future pilot proposals. *Id*.

Regarding the reporting requirements suggested by MNSC, EIBC/IEI, and the Staff, the ALJ declined to recommend any reporting requirements due to questions that remain unanswered in the record regarding the viability of the company being able to provide such information. She recommended that the reporting requirements be examined in future general rate case proceedings. *Id*., pp. 587-588. As well, the ALJ deferred the other recommendations suggested by the various parties, finding that they should be examined in DTE Electric's next general rate case when the company would purportedly provide a permanent Charging Forward plan. PFD, p. 588 (citing December 22 order, p. 312).

DTE Electric excepts to the ALJ's recommendation that the company submit a full-scale Charging Forward plan in its next rate case and the expectation that its presentation include a BCA. The company reiterated the points made in its case presentation that certain pilots were not sufficiently mature to be placed in permanent standing and that EV market conditions are rapidly evolving. DTE Electric's exceptions, pp. 154-155.

The Attorney General replies that she is in full support of the ALJ's analysis and conclusions regarding the future Charging Forward permanent program, including the requirement of a BCA. Attorney General's replies to exceptions, pp. 52-53.

The Commission finds the ALJ's recommendations well-reasoned and supported in the record. Accordingly, the Commission adopts the ALJ's findings and conclusions on this issue.

The Commission further directs DTE Electric to prepare and submit, with its next rate case, a full scale, well-developed, permanent Charging Forward proposal that includes a BCA. The Commission is not persuaded that all the company's pre-existing pilots lack sufficient development to transition to a permanent program or that the EV market conditions are evolving too quickly for the company to respond; however, should that be the case, the company may submit with the rate case its reasons for the delay in transition from pilot to permanent program and a proposal for a different timeline for the Commission's consideration. PFD, p. 587. The requirement of a BCA should not be interpreted as a requirement that all pilots be financially solvent at the time they are proposed (although that is preferable) but that when weighing costs versus benefits for a full-scale program, benefits outweigh costs over the duration of the program.

5. Residential Battery Pilot

DTE Electric requested $3.3 million ($184,000 in O&M and $3.144 million in capital expenditures) to fund its newly proposed 10-year BTM residential battery pilot wherein up to 500 residential customers would access back-up power during outages from up to 1,000 customer-sited batteries. The program is planned to operate on two tiers: one income-eligible customer group of 250 would receive batteries without cost to the customer and a second customer group of 250 would pay a monthly subscription fee in the neighborhood of $29.99 to $49.99 per month. The company plans to issue an RFP to obtain information about appropriate battery providers but the program will not include a bring your own device (BYOD) option. DTE Electric hopes to obtain learnings from the program including resiliency, battery control, and battery technology, among other things. 7 Tr 2484, 2486-2487, 2490-2491; *see also*, Exhibit A-12, Schedule B5.10, p. 1, lines 5, 10.

The Staff did not support the residential battery pilot, finding its focus on outage management to be inappropriately narrow and its exclusion of solar-powered residences to be short-sighted. The Staff further opined that there was no value in excluding third-party batteries, especially in light of the FERC's Order 2222 permitting the aggregation of third-party batteries. The Staff also pointed out that customers would receive better price signals through third-party ownership of batteries because there would be no program costs subsidized by non-participants. The Staff recommended that the Commission decline to approve the program as currently proposed and that DTE Electric should develop the pilot through collaboration with relevant stakeholders in accordance with the Commission's August 11, 2021 order in Case No. U-21032 (August 11 order).[40] 8 Tr 5378-5379, 5381.

The CEOs also opposed the residential battery pilot proposal because it lacks important details such as the circuits to be targeted and performance metrics for expected learnings, excludes customers with solar DG, and is overly focused on backup power. The CEOs stated that DTE Electric provided no clear reason why the proposal includes exclusive company-ownership of the batteries. 8 Tr 3653.

EIBC/IEI also opposed the pilot for similar reasons as those stated by the Staff and the CEOs, including that ownership by the utility of customer-sited batteries inserts rate-regulated monopolies into the competitive residential energy storage market. In addition, EIBC/IEI were disdainful of DTE Electric's plan to test customers' willingness to pay more each month for a service over which the utility has a monopoly. EIBC/IEI noted that the Commission has previously rejected similar plans proposed by Consumers.[41] 8 Tr 4405, 4407-4408, 4414.

The DAAOs criticized the residential battery pilot on the grounds that customer-owned batteries (prohibited in the company's current proposal) would reduce the program's cost and that DTE Electric had designed the program to improve the company's presence in the residential battery market. The DAAOs opined that the program's pay-to-participate element favors higher income households and does not assist those households that are economically-disadvantaged. The DAAOs opined that the program should be redesigned to eliminate the willingness-to-pay element, to permit BYOD and PAYS options, to add outflow credits to compensate for electric

[40] The August 11 order discussed energy storage resources (ESRs) and the development by utilities of ESR-related pilots.

[41] EIBC/IEI referenced Case Nos. U-20963 and U-20649.

power provided to the grid, and to add a number of equity-focused credits. 8 Tr 4297, 4299, 4302, 4307.

MI-MAUI/Ann Arbor opposed the residential battery proposal, asserting that residential customers prefer solar generation or self-ownership of batteries and that the residential battery program's benefits are limited and unattractive. 8 Tr 3312-3313.

In rebuttal, DTE Electric asserted that company-ownership of residential batteries is essential to gain proper circuit-level concentration and for safety (especially when compared to BYOD), as well as to gain learnings about market dynamics. The company also argued that company ownership of residential batteries is the best way to achieve the type of aggregation discussed in FERC's Order 2222. In addition, DTE Electric declared that the residential battery market is new and may be currently skewed toward higher income households but BYOD programs would not help achieve equity. 7 Tr 2525-2526.

The ALJ recommended that the Commission deny DTE Electric's residential battery pilot proposal and disallow the company's funding request for the program. The ALJ stated that the opposition to the project by intervening parties was thorough and persuasive. As well, the ALJ noted that the Commission had recently expressed similar concerns and rejected a comparable proposal by Consumers in the December 22 order.[42] The ALJ also recommended that DTE Electric should redevelop the pilot in conjunction with extensive stakeholder input and in a manner that would address or eliminate the concerns expressed by the intervenors to this proceeding. PFD, pp. 593-594.

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[42] The December 22 order rejected Consumers' proposed "Home Battery" pilot, a proposal that has both significant differences and similarities to DTE Electric's proposal in the instant case. *See*, December 22 order, pp. 317-326.

DTE Electric excepts to the ALJ's rejection of the residential battery pilot proposal. The company argues that the pilot is small, intended as a grid assessment, and focuses on the company's ability to gain related knowledge during the pilot period. The company avers that the pilot is not intended to facilitate third party interests and reiterates its reasons for company ownership of the residential batteries; for example, BYOD will possibly make system issues worse during periods of high demand that company ownership would mitigate due to company monitoring and controls. Additionally, the company argues that current market pricing for residential batteries renders it likely affordable for only higher-income populations. DTE Electric's exceptions, pp. 155-158.

In its exceptions, the DAAOs expressed support for the rejection of the residential battery pilot proposal and added that any residential battery program should permit BYOD. The DAAOs also supported the ALJ's recommendation that DTE Electric look to the December 22 order for guidance on the benefits of BYOD and promoting equity through pilot design. The DAAOs' exceptions, p. 1, 6-7.

The Attorney General replies that she agrees with the ALJ's analysis and rejection of DTE Electric's proposed residential battery pilot, reasserting that a pilot conducted solely for company learnings does not meet the Commission's requirements for pilot project details such as a BCA, among others. The Attorney General encourages the Commission to reject this proposal. Attorney General's replies to exceptions, pp. 52-53.

DTE Electric replies that the DAAOs' exception filing does not contain an actual exception to the PFD, but solely states their agreement with the ALJ on the residential battery pilot issue. Accordingly, DTE Electric argues that the DAAOs' exception is not in compliance with Mich Admin Code, R 792.10435. DTE Electric reiterates the arguments set forth in its exceptions filing in support of the residential battery pilot. DTE Electric's replies to exceptions, pp. 2, 35; *see also*, DTE Electric's exceptions, pp. 155-158.

The CEOs reply that DTE Electric has not convincingly justified the need for company-owned batteries or why the company's proposal excludes solar customers and customers that currently own batteries. Accordingly, the CEOs advise the Commission to reject the residential battery proposal. CEOs' replies to exceptions, pp. 10-11 (quoting PFD, p. 593; citing 8 Tr 3652, 3658; CEOs' initial brief, pp. 70-71).

EIBC/IEI reply with a reminder that the Commission rejected a similar proposal from Consumers and quotes the ALJ that "DTE [Electric] should study the Commission's order in [C]ase [No.] U-20963 for guidance on what the Commission would like to see in a home battery pilot." EIBC/IEI's replies to exceptions, p. 4 (quoting PFD, pp. 563-594). EIBC/IEI opine that the development of a residential battery pilot with input from stakeholders will result in a program with worthwhile ratepayer benefits and will aid in the development of a competitive DER market. *Id*.

The Commission finds the ALJ's recommendations well-reasoned and supported in the record. Accordingly, the Commission adopts the ALJ's findings and conclusions and rejects the residential battery pilot. The Commission is very supportive, in general, of utilities implementing residential battery pilots, and is eager to see development of innovative programs in this area. The Commission favors some elements of DTE Electric's residential battery proposal, for example, the income-eligible aspect where customers receive batteries at no cost, but would like to see changes in other elements, such as broader benefits to participants, the company-owned batteries requirement, ineligibility of solar customers, and the narrow focus on the provision of back-up power and limited emphasis on company learnings as opposed to a broader focus on customer benefits. The Commission finds the intervenors' comments persuasive, as a whole, and notes concerns about the utility inserting itself into the home battery market in a manner that would, perhaps, unfairly inhibit private sector competition. The Commission agrees with the Staff's comment that customers would receive better price signals through third-party ownership of batteries because there would be no program costs subsidized by non-participants. The Commission adds that additional focus on under-performing or overloaded circuits could add value to the program. The 10-year duration of the pilot on these narrow terms is also shortsighted– a pilot of that duration should include explicit provisions to allow for flexibility and responsiveness to changing conditions. Finally, the Commission would like to see pilot proposals that provide more benefits to ratepayers at-large, either through relief of overloaded segments at the circuit-level or grid-wide through the avoidance of additional load during periods of peak demand, rather than a pilot that focuses on benefits to individual ratepayers. Going forward, the Commission would like to see the company consider the deployment of new residential batteries, as well as leveraging existing batteries, as additional tools for creating a more reliable and resilient distribution system. The Commission will expect to see a BCA supporting a residential battery project as part of the application and expresses its hope that such a process will allow for the development of a diverse set of beneficial, positive-BCA projects.[43] In its December 22 order, the Commission stated what it would like to see in a residential battery pilot proposal:

> • For BYOD, participating customers be provided with the opportunity to have the utility discharge the batteries more often than proposed by the company for testing. Particularly, the Commission would like to see company utilization of these

[43] The Commission clarifies its expectation that while it expects the BCA for the full program to be positive, it also acknowledges that pilots may not have a positive BCA, at least initially. That said, the Commission still expects a BCA to be submitted with pilot proposals, as well as a description of what is being tested through the pilot phase and how this pilot is expected to eventually lead to net benefits for customers, consistent with the best practices outlined in the February 4 order in Case No. U-20645.

batteries during peak to test potential system-wide benefits. Rates could be adjusted based on the amount of flexibility of use allowed to the utility.

• For BYOD, the company investigate a framework for allowing the customers to utilize some minimum portion of the battery storage for their own purposes.

• For company-owned batteries, [the company] more fully utilize the value of the company's investment to provide as much benefit to the system from the batteries as is possible. [The company] should discuss options with stakeholders regarding a minimum acceptable amount of charge on the batteries to provide some resiliency service to the customer, while at the same time more fully utilizing the remaining portion of the battery every time it is economic for the company to do so.

• Prior to approval, the company provide an analysis on how the benefits of this program are realized by those not participating in the program.

• The program proposal include filing of annual reports on each type of storage pilot offered, outlining the utilization of the assets by the company and by the customer for different purposes, comparing the costs of the pilots to the value provided to both the participating customers and non-participating customers (value to the system). The results provided in these reports would be utilized to determine whether or not future expansion of the pilots or full-scale adoption would be appropriate and whether or not any cross-subsidization is occurring. These reports should also include the specific data reporting provisions detailed in the August 11 order. *See*, August 11 order, p. 26.

• The company consider obtaining more stakeholder input prior to filing a request for approval, particularly for any company-owned storage pilots.

• [The company] inform how standardized invertor settings (Institute of Electrical and Electronics Engineers' standard IEEE 1547) in Michigan could increase the value stack for customer and company-owned DERs sited on the utility's service territory.

• [The company] explain how the pilot objective coincides with FERC Order 2222. Specifically, the company should detail how these batteries will be aggregated for wholesale market participation, including consideration of multiple structures for aggregation, as detailed in the August 11 order. *See*, August 11 order, p. 25.

• [The company] consider allowing for home battery systems to participate in Residential DR programs . . . .

December 22 order, pp. 324-325 (footnote omitted).

As discussed earlier in this order, the Commission strongly encourages DTE Electric, moving forward, to consider submitting its pilot project proposals outside of the general rate case process, where feasible and appropriate, and with such an application for the company to include a request for deferred accounting treatment. Here, the Commission believes that this suggested alternative path for pilots would be appropriate for this residential battery pilot, given the Commission's decision, and that such approval could be requested on an *ex parte* basis.

The Commission also finds that there may be value in convening utilities, other stakeholders, and the Staff for a technical conference on battery storage pilots. While the Commission is supportive of efforts to develop residential battery storage pilot proposals, and as noted above, approves of a number of elements included in DTE Electric's proposal in the present case, it has not yet been able to approve a battery storage pilot proposed by either DTE Electric or Consumers. To that end, the Commission intends to hold a technical conference on residential battery storage to identify national best practices in utility battery storage pilot design, identify continuing areas of disagreement between stakeholders, and seek to identify opportunities for greater alignment that will allow a clearer path to Commission approval for future residential battery storage pilots. Additional details on this technical conference will be shared in early 2023.

B. Earnings Sharing Mechanism

ABATE presented that it preferred that the Commission set utility rates through use of a historical test year (with adjustments for known and measurable changes) rather than a projected test year. In rates set through use of a projected test year, ABATE recommended that the Commission carefully examine all expenses presented in the rate case, as well as ensure that projected expenditures and investments are actually completed. ABATE contended that DTE

Electric is earning a higher ROE than authorized through its inaction on projected expenses and investments. 8 Tr 2901-2902.

ABATE further suggested that the Commission implement for DTE Electric an ESM of returning to ratepayers 100%, with interest, for earnings that exceed 30 basis points over the company's authorized ROE. ABATE stated its belief that this ESM would provide the company with the incentive to seek cost savings, lower customer rates, and prevent DTE Electric from enrichment gained through the use of a projected test year. ABATE recommended that excess earnings be returned to ratepayers on a percentage basis of the rates a particular class contributed to the excess earnings and pointed out that Northern States Power Company had agreed to an ESM in its most recent electric rate case settlement agreement (Case No. U-21097).
8 Tr 2902-2903, 2905. Additionally, ABATE suggested that the Commission reconvene a collaborative to discuss rate case filing requirements, including the issues ABATE raised in this proceeding. 8 Tr 2905-2906; *see also*, ABATE's initial brief, p. 9.

The Staff did not take a position on the ESM itself but opposed the manner of the earnings sharing refund mechanism (ESRM) developed by ABATE. The Staff suggested an alternative repayment method with which ABATE agreed:

> The total amount to be refunded would be split into two amounts based on the relative proportion of: (a) the amount by which the Company's actual revenue requirement (calculated in the same manner as that used in setting rates with any revenue not attributed to collection from rates treated as a reduction to the revenue requirement) was lower than that assumed in setting rates, and (b) the amount by which collected revenues from rates for each class exceeded projected revenues from rates used in setting rates (excluding any amounts for classes for which revenues were lower than projected). . . . The amount associated with expense would be allocated to the classes based on proportion of total projected revenue used to set rates (similar to the method proposed by ABATE initially), and the amount associated with revenues would be allocated to the classes for whom rate revenues were higher than projected (and not classes for whom rate revenues were lower than projected) in proportion to the amount of that class's overage to the total (similar to the method proposed by Staff initially . . . .

PFD, pp. 597-598 (quoting Exhibit AB-35, pp. 4-6); *see also*, Staff's initial brief, pp. 259-261.

DTE Electric disagreed with the imposition of an ESM as suggested by ABATE, stating that the topic could not be properly considered within the confines of a general rate case and, accordingly, should be denied. 7 Tr 2387; *see also*, Exhibit A-23, Schedule M1.

The Attorney General supported the ESM and was not persuaded by the company's timeliness argument, stating that every rate case contains numerous new programs, projects, and spending proposals that other parties to the case must review and evaluate in the short rate case statutory period. Attorney General's initial brief, pp. 11-12; Attorney General's reply brief, p. 45.

The ALJ recommended that the Commission deny ABATE's requested ESM, opining that: (1) the record does not contain sufficient detail about the ESM and ESRM to make an effective decision and (2) the ESM method is not an appropriate manner in which to address concerns that underdeveloped or preliminary spending proposals to which the company has not formed a full commitment are included in DTE Electric's rate case presentation. To remedy these issues, the ALJ recommended that the Commission require the company to present complete information regarding projected expenditures so that the parties to the proceeding and the Commission may effectively evaluate the proposals. The ALJ also recommended that the Commission carefully examine and address the company's capitalization policies. PFD, pp. 599-601.

MNSC notes in its exceptions that it supports an investigation into DTE Electric's capitalization accounting practices, opining that an investigation would require more transparency and accountability than a workgroup. MNSC's exceptions, pp. 6-9.

ABATE excepts to the ALJ's rejection of its ESM proposal, disagreeing that the record lacks sufficient development for its adoption. ABATE reiterates its arguments presented in the proceeding. ABATE's exceptions, pp. 1-2.

The Attorney General also excepts to the ALJ's rejection of the ESM proposal, stating that, while she agrees with much of the ALJ's analysis, she urges the Commission to give the proposal serious thought and, if rejected in the instant case, to consider directing ABATE and DTE Electric to flesh out a full, detailed proposal for the next rate case. Attorney General's exceptions, p. 18.

DTE Electric replies that none of the parties that have urged the Commission to adopt an ESM[44] have added any substantive argument in their exceptions. DTE Electric continues that ABATE's reliance on the Staff's failure to take a position on the ESM is misplaced in that lack of a statement of opposition from the Staff is not the equivalent of a statement of support. DTE Electric:

> maintains its position that if an ESM is to be considered, then it should be evaluated as part of a broader performance-based ratemaking (PBR) conversation. A larger discussion of PBR might include topics such as ABATE's ESM proposal and other metrics, incentives, and capital trackers as described by the Company in its Distribution Plan, Exhibit A-23, Schedule M1 (Crozier, 7 [Tr] 2387-2388).

DTE Electric's replies to exceptions, pp. 108-109.

The Commission agrees with the ALJ's reasoning, findings, and conclusion that the ESM proposal should be rejected. However, and as noted earlier in this order, the Commission agrees with the ALJ that a well-developed record and clear evidentiary support is necessary for the Commission to fully evaluate projected costs in rate case proceedings.

[44] DTE Electric refers to ABATE and the Attorney General, but also includes the DAAOs on the basis of the DAAOs' comments in their exceptions, pp. 15-16, that the company should be penalized for its shortcomings in the performance of its services.

C. Accounting

1. Capitalization Issues

The Staff and MNSC expressed concerns over DTE Electric's capitalization practices, in particular capitalization of IT and distribution expenses, which persuaded the ALJ to recommend that the Commission begin an investigation, outside the rate case process, to provide direction to DTE Electric regarding past capitalization choices and future capital expenditures. PFD, p. 601.

MNSC notes in its exceptions that it supports an investigation into DTE Electric's capitalization accounting practices, opining that an investigation would require more transparency and accountability than a workgroup. MNSC's exceptions, pp. 6-9.

The Commission is cognizant that utility capitalization policies and practices may be problematic. DTE Electric's capitalization issues are addressed in the discussion of Future Rate Cases, Further Study, Capitalization Practices, below.

2. Low Income Credits

The ALJ noted that DTE Electric and the Staff agreed that DTE Electric's "deferred asset and liability balances authorized in the May 8 order for LIA and RIA credits above projected levels-and subject to the caps provided–can be addressed in rate cases rather than in biennial reconciliations." PFD, p. 601. No exceptions were filed.

The Commission adopts DTE Electric and the Staff's agreement, above.

3. Outage Credits

DTE Electric requested Commission approval of deferred accounting for outage credits paid to customers for outages that are not the fault of the utility such those caused by vehicle accidents and falling trees that originated outside the right-of-way, among others. The utility plans that it would obtain approval from the Commission to recover the credits after the deferred amounts are approved. 7 Tr 2361; *see also*, 7 Tr 2270-2272.

Kroger opposed the deferred accounting proposal, declaring that whether or not DTE Electric is accountable for the cause of an outage, restoring service is always an expected company function, and therefore, to allow outage credits would lessen the incentive to restore service in a timely manner. Kroger further stated that rules applicable to outages and customer credits currently provide for the company to request waivers should that be desired. 8 Tr 4645-4646; *see also*, 8 Tr 4647-4648.

DTE Electric rebutted that outage credits are not a penalty and that the company invests millions of dollars in distribution capital and O&M to ensure a safe and reliable system. DTE Electric further rebutted that it is incentivized to restore service during an outage because customers who do not have service do not pay volumetric charges to the company. Additionally, DTE Electric pointed out that if the company received a waiver, then no credits would be paid to customers. 7 Tr 2380-2381; DTE Electric's initial brief, p. 225.

The DAAOs opined that the outage credits should be larger and not recoverable by the company. The DAAOs' initial brief, pp. 52-54. DTE Electric stated that its reply to Kroger is applicable to the DAAOs, as well. DTE Electric's reply brief, p. 164.

The Staff agreed with DTE Electric that some outage credits should be recovered from ratepayers but limited the company's list of types of eligible outages. For example, the Staff argued that restoring service for an outage caused by an auto accident or by a storm is a function that is expected of the company. The Staff opined that outages caused by customer negligence and those caused by the transmission system operator could be recovered. However, the Staff also stated that its proposal was not fully formed. 8 Tr 5437-5438. In its briefing, DTE Electric did not state an opposition to the Staff's proposal. DTE Electric's initial brief, pp. 224-225; DTE Electric's reply brief, p. 164.

The ALJ recommended that the Commission accept the Staff's admittedly incomplete proposal to limit DTE Electric's recovery to outages caused by, for example, customer negligence and transmission system operator problems, and to direct the company to work with the Staff toward its full development. PFD, p. 603.

In exceptions, DTE Electric argues that the ALJ erred when she stated that the company did not oppose the Staff's proposal and quotes its reply brief wherein it states that the company generally agreed with the Staff's proposal but disagreed with the Staff's limitations on the types of outages that would be recoverable. DTE Electric reiterates its position as presented in the proceeding and requests the Commission approve that proposal. DTE Electric's exceptions, pp. 200-201.

The DAAOs except to the ALJ's approval of the company's recovery of certain outage credits and argue that the outage credit system rewards the company for substandard service. The DAAOs further state that DTE Electric's shareholders should pay for outage credits. DAAOs' exceptions, pp. 1, 5-6.

MI-MAUI/Ann Arbor except to the ALJ's acceptance of DTE Electric's recovery of street lighting outage credits, reiterating the argument that this practice rewards the company for poor performance and that it is unreasonable to require customers to pay for a service they have not received. MI-MAUI/Ann Arbor's exceptions, p. 17.

The Attorney General replies that, while she concedes that Kroger has a point about disallowing DTE Electric's recovery of any outage credits, she believes that the Commission should adopt the Staff's analysis and proposal (and, ultimately, the ALJ's recommendation) for permitting the recovery of credits resulting from a narrow list of causes. The Attorney General proffers that the Staff's proposal will provide insight to the Commission and third parties, as well as offering the parties some input into the classification of customer outage credits and their inclusion in rates. Attorney General's replies to exceptions, pp. 68-69.

DTE Electric replies that the DAAOs argued that the company should have, essentially, strict liability for all outages. The company reiterates its case presentation that DTE Electric is committed to restoring outages as quickly as possible, regardless of cause. DTE Electric's replies to exceptions, p. 67 (citing DAAOs' exceptions, pp. 5-6). DTE Electric also proffers that some outages have been caused by a municipality striking underground cable and cites Ann Arbor's engineered permit drawings that result in a self-caused delay in restoration of service to the city. DTE Electric's replies to exceptions, p. 69.

In its replies, the Staff reiterates that it partially agrees with the company's proposal to recover outage credits; however, the Staff makes clear that it finds that DTE Electric should recover only those credits that were paid due to outages that are not within the company's control to resolve such as outages caused by the transmission system operator and outages caused by customer negligence. The Staff urges the Commission to adopt its proposal "without modification." Staff's replies to exceptions, p. 33; *see also*, *id*., pp. 32-33 (citing 272-273; 8 Tr 5437-5438; PFD, p. 603; DTE Electric's exceptions, p. 201).

The Commission finds the ALJ's recommendations well-reasoned and supported in the record. Accordingly, the Commission adopts the ALJ's findings and conclusions and directs DTE Electric to work with the Staff toward the full development of the Staff's proposed limited recovery of outage credits. The Commission upholds the company's responsibility to timely restore electric service to customers in all circumstances under the Commission's Service Quality and Reliability

Standards for Electric Distribution Systems (Mich Admin Code, R 460.701-752) and customers' entitlement to an outage credit on their power bill in circumstances where the company fails to do so. However, it is reasonable that the company have the ability to recover outage credits when the outage was caused by customer negligence or the transmission system operator, among other limited circumstances as developed in collaboration with the Staff. *See*, PFD, p. 603.

IX. COST OF SERVICE

A. Production Cost

DTE Electric proposed that the company continue to use the four coincident peak (4CP) 75-0-25 method, representing an average of the coincident peaks during four summer months (June through September) to allocate production costs as approved by the Commission in the May 8 order and in four additional prior rate cases.[45] DTE Electric presented that the two functions used in the cost of service study (COSS) were power supply (which includes generation and transmission) and distribution (which includes costs related to the company's distribution system and customer service). 6 Tr 1028, 1029-1030, 1039.

The Attorney General recounted the statutory history of the allocation of costs, stating that Section 1(1) of Public Act 286 of 2008 (Act 286), required the Commission to phase in, over a period of five years, electric rates that are based on the COS to each customer class using the 50-25-25 cost allocation method. The Attorney General noted that Section (11)(1) of Act 286, had permitted the Commission to establish another allocation method if use of 50-25-25 did not result in more transmission and production-related costs being allocated to primary customers. However, the Attorney General acknowledged that Public Act 341 of 2016 (Act 341),

[45] DTE Electric cited Case Nos. U-17767, U-18014, U-18255, and U-20162.

MCL 460.11(1), changed the cost allocation to 75-0-25. The Attorney General pointed out that the statute permits the Commission to use another formula if the 75-0-25 method does not result in rates that equal the COS. 8 Tr 4922-4923, 4925-4926; *see also*, MCL 460.11(1). The Attorney General posited that the allocation of costs method that would provide the most equitable assignment of costs is the 4CP 55-0-45 formula because it is consistent with system load factors during the previous five years and would, therefore, be in compliance with the current statute. The Attorney General recommended that the Commission direct DTE Electric to use this allocation formula. 8 Tr 4938-4939.

Walmart, while not specifically opposing the 4CP 75-0-25 formula for the instant case, recommended that the Commission review cost and usage trends for potential adjustment to the COSS formula. Walmart proposed that, if a change is to be made, use of a noncoincident peak (NCP) average and excess (A&E) method would be superior for reasons set forth in its testimony. 8 Tr 4133-4137.

MNSC proposed a change in the formula weightings but did not pursue the change in its brief. However, MNSC presented that it had examined DTE Electric's COSS, and, among other errors, it found that the Midwest Energy Resources Company (MERC)[46] plant is a fuel handling facility, not a generating plant. MNSC opposed DTE Electric's allocation of purchased power to the MERC plant expenses as if it were a DTE Electric-owned power plant. Accordingly, MNSC recommended that the Commission allocate the full cost of MERC-related expenses as a fuel cost for purposes of the unbundled COSS and, additionally, that O&M fuel handling costs be allocated

[46] The MERC plant is a wholly owned subsidiary of DTE Electric that is located in Wisconsin and offers coal transportation services to DTE Electric and other companies.

as fuel costs for the unbundled COSS and for capacity/non-capacity revenue requirements. 8 Tr 3842-3843, 3846.

On rebuttal, DTE Electric averred that MERC plant costs had been treated as production costs by the Commission since 2008 and also stated that the treatment of capacity charges were determined in the November 21, 2017 order in Case No. U-18248 (November 21 order). DTE Electric argued that handling the MERC plant in the manner suggested by MNSC would render the cost allocation out of sync with cost recovery. 6 Tr 1055. Regarding MNSC's other recommendation to treat the labor costs of fuel handling, not as production-related, but as fuel-related, DTE Electric asserted that only non-labor portions of FERC accounts[47] were included in O&M in accordance with the National Association of Regulatory Utility Commissioners (NARUC) Electric Utility Cost Allocation Manual (NARUC Manual), chapter 4. 6 Tr 1045.

In brief, MNSC argued that the Commission has not addressed the MERC plant and whether causation is better reflected by treating these costs as fuel related. MNSC's initial brief, p. 95. MNSC also noted that in Case No. U-18248, DTE Electric agreed that MERC should not be included in the capacity cost calculation. MNSC also argued that the MERC plant was not designed to serve only DTE Electric's customers and that the NARUC Manual supports the classification of the MERC plant expenses as energy costs and the labor costs of fuel-handling being classified as fuel-related. MNSC's initial brief, pp. 95-102.

[47] The FERC accounts at issue are: 501, fuel handling; 502, steam expense; 505, electric operations expense; 519, coolants and water; 520, steam expense; 538, electric maintenance expense; and 548, peaker expense.

The ALJ noted that no party other than DTE Electric disagreed with MNSC that MERC-related plant costs[48] should be excluded from the capacity cost calculation. The ALJ concluded that DTE Electric's presentation on the MERC issue was not sufficient to establish that the Commission had previously considered the classification and allocation of MERC-related costs. The ALJ found that excluding MERC-related costs was not in opposition to any Commission instructions, that it was consistent with NARUC Manual instructions, and was reasonable. PFD, p. 608.

Regarding the Attorney General's suggestion that the Commission adopt a 4CP 55-0-45 COS allocation, the ALJ found that the Commission had rejected the suggestion in previous cases. However, the ALJ also opined that the Commission may want to open a proceeding solely to examine COS allocations, perhaps after DTE Electric's next IRP case is resolved. PFD, pp. 608-609.

DTE Electric excepts to the ALJ's speculative finding that the Commission had not considered the MERC plant's function in the past and opined that, whether or not the Commission had evaluated the MERC before, it should do so now rather than merely agreeing with MNSC's proposal. DTE Electric's exceptions, pp. 202-203 (citing DTE Electric's reply brief, pp. 172-173, PFD, pp. 606, 608). Regarding the 4CP 75-0-25 allocation method, the company sees no reason that the Commission should initiate a stand-alone proceeding to examine whether a change should be made and avers that the determination should remain with the rate case process. DTE Electric's exceptions, pp. 203-204 (citing PFD, pp. 608-609; 6 Tr 1039).

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[48] The ALJ noted that ABATE's objection to the COS calculation was MNSC's proposal to use 4CP 65-0-35 instead of 4CP 75-0-25, which MNSC did not pursue.

The Attorney General excepts to the ALJ's apparent rejection of her proposed COS allocation formula. The Attorney General continues to support her preferred 55-0-45 allocation method and for a stand-alone proceeding to explore appropriate COS methodologies. Attorney General's exceptions, pp. 19-20.

In its exceptions, ABATE rejects the idea of a stand-alone proceeding to examine cost allocation, positing that the Attorney General's continued presentation of a deficient COS formula does not form a basis to conclude that a rate case is an inappropriate proceeding to determine the appropriate COS allocation. ABATE's exceptions, pp. 3-4.

In her replies, the Attorney General proffers that the ALJ is well within the scope of her responsibilities to recommend that the Commission conduct a stand-alone proceeding to study production cost allocations. The Attorney General points out that there exists significant concern related to not only DTE Electric's structure but that of other utilities, as well, and argues that a stand-alone proceeding may be a viable approach to the issue. Attorney General's replies to exceptions, pp. 69-70.

MNSC replies that it supports the ALJ's apparent adoption of its MERC allocation proposal and asserts that its witness was correct in stating that the Commission has not fully examined and adjudicated MERC fixed costs and that, correctly, those costs should be allocated as energy costs. MNSC reiterates its case presentation. Further, MNSC is puzzled by DTE Electric's meaning when the company stated that, if the Commission has not evaluated the MERC costs before, it should do so now. MNSC avers that the Commission always examines issues carefully and should find that MERC-related costs are energy costs. MNSC's replies to exceptions, pp. 61-65.

MNSC also replies that it supports the ALJ's apparent adoption of its proposed classification of labor costs related to fuel handling as a fuel-related cost. MNSC reiterates its case presentation and argues that the Commission should adopt this proposal. *Id*., pp. 66-68.

DTE Electric replies that, regarding the Attorney General's suggestion of the use of the 4CP 55-0-45 formula, the Commission has, in the past, rejected the same arguments and formula as were presented in the instant case. DTE Electric repeats that the Attorney General's calculations are incorrectly based on system load factors rather than on the equivalent peaker method as described in the NARUC Manual,[49] and as directed in the May 2 order. DTE Electric's replies to exceptions, p. 71 (citing 6 Tr 1059; Case No. U-20561, 9 Tr 2857; May 8 order, p. 220).

ABATE replies that the Attorney General's proposals (both the 4CP 55-0-45 cost allocation and the stand-alone proceeding to examine different cost allocation methods) are unnecessary and unreasonable. ABATE continues that the Attorney General has presented the same arguments as have been rejected in prior proceedings and should again be rejected in the instant case. ABATE also points out that the Attorney General is the only party that persisted in the recommendation of a different allocation formula and, with that formula having been rejected, there is no need for a stand-alone proceeding. ABATE's replies to exceptions, pp. 1-2 (citing Attorney General's exceptions, pp. 19-20; ABATE's initial brief, pp. 9-31; ABATE's reply brief, pp. 2-4; ABATE's exceptions, pp. 3-4).

The Commission agrees with the ALJ's reasoning that MERC-related plant costs should be allocated as fuel-handling costs and, accordingly, adopts her findings and conclusions that MERC-

[49] "The NARUC Manual describes two methods for allocating costs using equivalent peaker methods, which are based on (1) the original cost to install generating units, and (2) a comparison of the rate bases of base load and peaker units." DTE Electric's replies to exceptions, p. 71.

related expenses should not be included in DTE Electric's capacity cost calculation. *See*, PFD, p. 608. The ALJ did not specifically respond to the question of whether the labor costs of fuel-handling O&M should be allocated as fuel costs. The Commission finds that these costs should be considered fuel costs and not included in the capacity cost calculation for the same reasons the ALJ found that MERC-plant costs should be excluded. *Id*.

Regarding the ALJ's recommendation that the Commission reject use of a 4CP 55-0-45 COS allocation, the Commission finds the ALJ's recommendation to be well-reasoned and supported in the record. Accordingly, the Commission adopts the ALJ's findings and conclusion on this matter and rejects the 4CP 55-0-25 allocation method. *See*, PFD, p. 608.

The Commission respectfully disagrees with the ALJ that a stand-alone proceeding to examine DTE Electric's COS allocations is warranted at this time. While the parties to the proceeding offered thoughtful theories and proposals, the record evidence does not establish that the 4CP 75-0-25 method fails to "ensure that rates are equal to the cost of service." MCL 460.11(1). Lacking record evidence to support such a finding, the Commission declines to conduct a stand-alone proceeding on the matter. *See*, PFD, pp. 608-609.

B. Line Loss Factors

DTE Electric presented the line loss study that the company had prepared by an independent engineering firm in partial accordance with the Commission's directive in the May 8 order. DTE Electric explained that certain recommendations in the order were not included in the independent study, disclosing that significantly more resources would have been necessary to obtain that information. 7 Tr 1566-1569; *see also*, Exhibit A-28.

ABATE rejected DTE Electric's independent line loss factor study because the company based its line loss factors on the average demand for each month and an annual system peak.

ABATE prepared its own line loss factors, set forth in Exhibit AB-4, and argued that its figures should replace DTE Electric's line loss study because ABATE's report is more accurate for the following reasons: (1) it reflects line losses based on monthly peak demand rather than the single annual peak, (2) line losses are greatest at the monthly peak, i.e., as load increases, so do line losses, and (3) a formula using both the monthly average and the monthly peak arrives at a more accurate estimation of line loss. 8 Tr 2988-2992; ABATE's initial brief, pp. 31-37. In its reply brief, ABATE stated that neither DTE Electric nor the Staff disagreed with ABATE's premise that line losses are greater during peak conditions than during average system conditions and asserted that its proposal is closer to causation than DTE Electric's proposal. ABATE's reply brief, pp. 4-6. Kroger supported ABATE's line loss theories and calculations. 8 Tr 4669-4673.

In rebuttal, the Staff disagreed with ABATE and Kroger, stating that ABATE's testimony was contradictory regarding the feasibility of estimating peak line losses from an average line loss study. The Staff recommended that the Commission not use estimated line loss factors. DTE Electric argued that ABATE's recommendations were based on incomplete system information and have not been reviewed. 8 Tr 5120; 7 Tr 1465; *see*, Staff's initial brief, p. 269 and DTE Electric's reply brief, p. 165.

The ALJ recommended that the Commission reject ABATE's line loss proposal. The ALJ opined that ABATE's figures have not been validated over an acceptable period of time and that the potential understatement of line losses during peak times is not a significant reason to employ any estimate to adjust for the under-estimate. Further, the ALJ noted testimony that determining marginal line losses is a complex process and she seemed to doubt whether the precision that ABATE would like is achievable. PFD, p. 611 (citing 7 Tr 1559-1568).

ABATE excepts to the ALJ's rejection of ABATE's line loss study, reiterating its case presentation as to the reasons why ABATE's proposal would result in rates that equal the COS, and that DTE Electric's line loss study is deficient. ABATE's exceptions, pp. 4-6.

Kroger did not except to the ALJ's recommendation on the line loss factor issue; however, Kroger encourages the Commission to require DTE Electric, in its next electric rate case, to provide a line loss study of line loss factors using 4CP and 12CP demand from meter to generator. Kroger asserts this manner of determining the allocation will be more accurate than the way in which DTE Electric currently determines line loss factors. Kroger's exceptions, pp. 1-2.

DTE Electric replies that ABATE's exception should be rejected, having failed to overcome numerous deficiencies and flaws in its proposal. DTE Electric's replies to exceptions, p. 76 (citing ABATE's exceptions, pp. 4-6). DTE Electric also replies that the company disagrees with ABATE's suggestion that the Commission should require the company, in its next electric rate case, to file line loss factors that reflect peak loading. DTE Electric argues that: (1) the Commission has stated that it will consider a revised line loss methodology and (2) the precision that ABATE seeks is not attainable. DTE Electric's replies to exceptions, p. 76 (citing 7 Tr 1465; ABATE's exceptions, p. 6; PFD, p. 611).

In reply to Kroger's exception that the Commission should direct the company, in its next electric rate case, to submit a line loss study that considers the 4CP and 12CP demand allocators from meter to generator, DTE Electric disagrees. The company states that Kroger cites only an order for another utility in support of this suggestion and offers no argument as to its relevance in the instant case. Accordingly, DTE Electric opines that the Commission should reject Kroger's unsupported "academic inquiry." DTE Electric's replies to exceptions, p. 77 (citing Kroger's exceptions, p. 2).

The Commission finds the ALJ's recommendations to be well-reasoned and supported in the record. Accordingly, the Commission adopts the ALJ's findings and conclusions and rejects ABATE's proposed estimated line loss methodology. The Commission also rejects Kroger's suggestion that the Commission should direct the company, in its next electric rate case, to submit a line loss study that considers the 4CP and 12CP demand allocators from meter to generator. The Commission agrees with DTE Electric that Kroger cites only an order for another utility in support of this "academic inquiry" and offers no argument as to its relevance in the instant case. *See*, DTE Electric's replies to exceptions, p. 77; PFD, p. 611.

C. Capacity Charge Revenue Requirement

DTE Electric presented the company's calculation of its proposed state reliability mechanism (SRM) capacity charge revenue requirement in Exhibit A-16, Schedule F1.5 revised, and testified that the company used the same methodology in the instant case as it had in prior cases[50] and as approved in the May 8 order. 6 Tr 1039. DTE Electric also presented that the company calculated energy sales revenue net of fuel costs in the same method as approved in the May 8 order. 6 Tr 1043-1046; *see also*, Exhibit A-16, Schedule F1.5 revised; MCL 460.11(1).

The Staff testified that DTE Electric did not use the Commission-approved manner of determining the capacity revenue requirement in that the company, contrary to the May 2 order, had incorrectly included MISO Schedule 17 market administrative costs as a fuel cost to be subtracted from projected energy sales revenue.[51] The Staff presented a corrected calculation in

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[50] DTE Electric cited the orders in Case Nos. U-17767, U-18014, U-18255, and U-20162. 6 Tr 1039.

[51] *See*, May 2 order, p. 129.

the amount of $1,538,293,000, set forth in Exhibit S-6, Schedule F1.5. 8 Tr 5109-5110; *see also*, Staff's initial brief, pp. 263, 269-270; Staff's reply brief, pp. 30-31.

Energy Michigan presented that DTE Electric incorrectly included non-fuel expenses, e.g., included net of projected fuel-related costs, rather than net of projected fuel costs, when calculating its SRM capacity charge, in violation of MCL 460.6w and contrary to the Commission's order in Case No. U-18248.[52] In addition, Energy Michigan opined that DTE Electric should not use the true-up of projected 2019 costs in setting part of its 2020 SRM capacity charge and requested that the Commission eliminate the true-up process so long as the company did not charge the previous SRM capacity charge to ratepayers. Energy Michigan stated that, if a true-up is to be used, the projected year and the actuals year should match; for example, net revenues for projected year 2020 should be used with net actuals from 2020. Energy Michigan also recommended that the Commission require DTE Electric to provide complete information on the record so that an SRM capacity charge can be calculated. 8 Tr 4487-4488, 4505-4512; *see also*, Exhibit EM-6, -7; Energy Michigan's initial brief, pp. 2-3; MCL 460.6w(3)(b).

DTE Electric rebutted that the company had calculated its SRM capacity charge as instructed in the May 2 order and that Energy Michigan was incorrect: (1) energy sales net of fuel true-up should be included in the capacity charge calculation, and (2) the company correctly used 2019 projections for 2020 and actual 2020 figures to determine the charge and true-up value. 4 Tr 150-151; 7 Tr 2392-2394; 8 Tr 5117-5118; *see also*, DTE Electric's initial brief, p. 263; DTE Electric's reply brief, p. 176.

[52] Energy Michigan refers to the November 21 order, an order that established an SRM capacity charge, among other things.

The ALJ recommended that the Commission reject DTE Electric's calculation and expressed puzzlement over DTE Electric's presentation that is so clearly inconsistent with both the Commission's directive regarding the inclusion of MISO Schedule 17 administrative costs in the fuel cost offset to projected energy sales revenue[53] and MCL 460.6w. The ALJ further remarked that DTE Electric supported its calculation in the instant case with reliance on the company's erroneous calculation in Case No. U-20561[54] that somehow escaped review. The ALJ further agreed with the Staff that projected net revenues for a year should be reconciled to actual net revenues for that year and that MCL 460.6w(4) indicates that, in the true-up, there may be a utility charge or credit, reasoning that the legislature used the term "true-up," and thus, the true-up cannot be eliminated. PFD, pp. 617-619. The Staff's corrected calculation for SRM capacity revenue requirement is $1,538,293,000. *See*, Exhibit S-6, Schedule F1.5.

Regarding Energy Michigan's concerns related to the true-up and capacity charge, the ALJ stated that MCL 460.6w(4) specifies:

> The commission shall provide for a true-up mechanism that results in a utility charge or credit for the difference between the projected net revenues described in subsection (3) and the actual net revenues reflected in the capacity charge. The true-up shall be reflected in the capacity charge in the subsequent year. The methodology used to set the capacity charge shall be the same methodology used in the true-up for the applicable planning year.

Accordingly, both a true-up and a charge or credit is required in the capacity charge of the subsequent year. PFD, pp. 619-620.

DTE Electric excepts to the ALJ's finding that the company used a nonconforming calculation to determine its SRM capacity charge. DTE Electric avers that the Commission permitted the

[53] *See*, May 2 order, p. 129.

[54] *See*, May 8 order, p. 225.

inclusion of fuel-related costs in the May 8 order, finding that such costs are incurred through energy production from the company's generation resources. The company argues that the costs are included to ensure PSCR customers do not subsidize those paying the SRM charge. The company further argues that incurring fuel-related costs is a necessary part of generating energy sales revenue. Additionally, the company reasserts that the NARUC Manual considers labor costs to be demand related, but material expenses are considered to be energy related. The company urges the Commission to approve its proposal as submitted, consistent with past Commission orders in DTE Electric rate cases. DTE Electric's exceptions, pp. 204-206 (citations omitted).

Energy Michigan excepts to the ALJ's acceptance of the true-up calculations on two counts. First, Energy Michigan reiterates its position that including a true-up when determining the SRM in a subsequent period, even when the utility has not over- or undercharged customers for capacity costs, "all but guarantees that DTE [Electric] will overcharge or undercharge an AES [alternative electric supplier] customer that becomes subject to the charge." Energy Michigan's exceptions, p. 2. Second, Energy Michigan asserts that DTE Electric, to perform its true-up, incorrectly included the actuals for the entire calendar year of 2020 as its applicable term of the capacity charge even though the Commission issued the May 8 order about half-way through the year. Energy Michigan argues that the entire 2020 calendar year is not the applicable term of the capacity charge, thereby making DTE Electric's calculation incorrect. *Id*., pp. 2-3; *see also*, MCL 460.6w(3)(a).

DTE Electric replies that Energy Michigan's argument that there is no need for a true-up if the previous capacity charge has not been applied to any party[55] must fail because the statute does not

[55] DTE Electric presumes that Energy Michigan means Electric Choice customers. DTE Electric's replies to exceptions, p. 77 (citing 8 Tr 4510).

specify that the capacity charge true-up is dependent on whether an Electric Choice customer has paid a capacity charge during the time frame being reconciled. Additionally, DTE Electric argues that the statutory language is clear and must be applied as written regardless of Energy Michigan's opposition. DTE Electric's replies to exceptions, pp. 77-79 (citing 7 Tr 2393-2394; PFD, p. 620).[56] Finally, the company argues that it must use 2019 PSCR year projections for the 2020 true-up because the 2019 projections were embedded in its rates for the year 2020. Accordingly, Energy Michigan's argument on this point must fail, as well. DTE Electric's replies to exceptions, pp. 79-80.

The Staff replies that Energy Michigan seems to be arguing that AES (or Electric Choice) "customers paying the capacity charge receive a personalized refund or charge, rather than the impact on their rate that would apply through a roll-in." The Staff remarks that "[t]his is a new argument, one for which Staff finds no support . . . within the record. Therefore, Staff recommends that it be rejected." Staff's replies to exceptions, p. 21 (citing Energy Michigan's exceptions, p. 2).

Regarding DTE Electric's insistence that MISO Schedule 17 Market Administrative costs should be included in fuel costs used to offset projected energy sale revenue, the Staff reiterates that DTE Electric is wrong and that the company's SRM capacity charge should be rejected. The Staff points out that, in Case No. U-20561, DTE Electric's witness testified that its capacity charge calculation method conformed with the May 2 order, when, in fact, it did not. Accordingly, the

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[56] DTE Electric cites a number of court decisions in support of its statutory interpretation, among them are: *Di Benedetto v West Shore Hosp*, 461 Mich 394, 402; 605 NW2d 300 (2000); *Hansen v Mecosta Co Rd Comm'rs*, 465 Mich 492, 504; 628 NW2d 326 (2002); *Mayor of City of Lansing v Public Serv Comm*, 470 Mich 154, 165-66; 680 NW2d 840 (2004). *See*, DTE Electric's replies to exceptions, pp. 78-79, nn. 62-65.

non-conforming calculation did not come to light in Case No. U-20561 and remained uncontested. The Staff argues that its calculation in the instant case corrects the error in Case No. U-20561 and conforms with the May 2 order. Staff's replies to exceptions, pp. 21-22 (citing DTE Electric's exceptions, pp. 204-206; PFD, p. 619).

In its replies, Energy Michigan reiterates the argument that DTE Electric cannot rely on the inadvertent inclusion of "fuel-related" costs in the May 8 order, when the reason that the inclusion was permitted was, that DTE Electric's witness incorrectly testified that the calculation in that case was consistent with the calculation in Case No. U-20162, when, in fact, it was not. Energy Michigan's replies to exceptions, p. 2-3; *see also*, Case No. U-20561, 4 Tr 467-468.

The Commission finds the ALJ's recommendations well-reasoned and supported in the record. In exceptions and replies to exceptions, the parties restated their positions as presented in the proceeding and did not bring any significant new arguments for the Commission's consideration. Accordingly, the Commission adopts the ALJ's findings and conclusions on this matter including the Staff's corrected calculation, updated for this order, for the SRM capacity revenue requirement of $1,474,703,000, which, using Energy Michigan's MW value of 12,524 MW (which was not objected to in exceptions) for the SRM Capacity Charge Demand denominator, equates to an SRM capacity charge of $117,750 per MW-year or $322.60 per MW-day. The Commission also finds reasonable Energy Michigan's request for transparency on this issue and thus finds it appropriate for DTE Electric to include the components and methodology of the company's SRM capacity charge proposals in future general rate case applications, similar to Energy Michigan's breakdown of the same in Exhibit EM-6. Energy Michigan's initial brief, pp. 7-11.

D. Secondary Voltage Distribution Costs

DTE Electric presented that it contracted with an independent consulting firm to prepare a new line loss[57] study for this proceeding which was based on 2019 data that separates average line losses by voltage and by month, thus permitting allocation schedules to correctly reflect the demands on the system caused by various classes of customers. DTE Electric presented the methodology that was employed to calculate the company's line losses but noted that the company did not fulfill all the Commission's suggestions from the May 8 order because it would have required 18 months for completion at a cost of more than $15 billion. DTE Electric opined that, while its study is less granular than that suggested by the Commission, it provides enough detail to accurately determine how changes in load may affect each system component. The study submitted by DTE Electric separated distribution secondary losses (those that occurred between the transformer and a customer's meter) from distribution primary losses. The company noted that field measurements of the voltage and length of secondary distribution lines were taken in multiple installations. DTE Electric also conducted a marginal study to be used with the line loss study. 7 Tr 1559-1569; *see also*, Exhibit A-28, Schedule R1; 7 Tr 1563-1564, Table 2.

The Attorney General argued that DTE Electric's proposed line loss allocation places too much weight on individual customer peak loads and fails to account for the differing peak demands placed on the system by customers. The Attorney General asserted that when the differing customer peak demands are taken into account, secondary-voltage distribution plant facilities need not be designed to serve the maximum demand of each customer simultaneously.

[57] Line loss is the difference in the energy required for the electrical system and the amount of energy consumed by customers. 7 Tr 1558.

The Attorney General argued that a better approach would be to employ class NCP demands for secondary voltage distribution systems (feeders, substations, and transformers, etc.) but acknowledged that the Commission rejected this method in the May 8 order. 8 Tr 4939-4943; *see also*, Attorney General's initial brief, pp. 97, 108, 110.

DTE Electric argued that the Attorney General brought no new evidence to the proceeding on this issue and, basically, repeated its presentation from Case No. U-20561. DTE Electric's reply brief, pp. 169-170.

The ALJ agreed with DTE Electric, noting the Commission's May 8 order. PFD, p. 621 (citing May 8 order, pp. 223-225).

The Attorney General excepts to the ALJ's apparent rejection of its secondary voltage proposal. She disagrees that past rejection of her arguments should inform a decision in the instant case and argues that her presentation should be provided full consideration. The Attorney General asserts that, at a minimum, the Commission should convene a stand-alone proceeding in which the issues presented here are included. Attorney General's exceptions, p. 20.

The Commission finds the ALJ's recommendations well-reasoned and supported in the record. Accordingly, the Commission adopts the ALJ's findings and conclusions and rejects the Attorney General's secondary voltage proposal and the suggestion that the Commission convene a stand-alone proceeding to examine secondary voltage issues.

E. Uncollectible Expense Allocation

DTE Electric proposed that the company allocate uncollectible expense costs to customer classes based on net write-offs, as it has in the past. DTE Electric opined that allocation is appropriate because the class in which the uncollectibles occur is the class allocated to pay for the write offs. 6 Tr 1041. However, the Staff argued that uncollectibles should be borne by all customers and allocated based on total revenue, consistent with the December 22 order. 8 Tr 5110-5111; *see also*, December 22 order, p. 354. DTE Electric rebutted that the decision to pay or not pay for power use rests with individuals and that, accordingly, the class containing the most non-paying individuals should bear the highest burden of paying for uncollectible expenses. 6 Tr 1066-1068.

The ALJ recommended that the Commission adopt the Staff's proposal for allocating uncollectibles expense by total revenue rather than by net write-offs. The ALJ noted that the Commission approved the Staff's proposed uncollectibles allocation method in its recent decisions, i.e., in the December 22 order (Consumers' most recent electric rate case) and in the December 29 order (DTE Gas's most recent gas rate case). PFD, p. 623.

DTE Electric excepts, arguing that customer groups are established as rate classes because they are similarly situated and that uncollectibles should be allocated in a manner that allocates a proportional cost to a particular rate group based on the amount of uncollectibles that are incurred in the group. The company points out that, in previous DTE Electric rate cases, the Commission has approved this type of allocation and that the ALJ lacked a sound basis to recommend that uncollectibles be apportioned on the basis of total revenues. DTE Electric's exceptions, pp. 206-207 (citations omitted).

The Staff replies that the ALJ was correct in her recommendation that uncollectibles should be allocated based on total revenue and asserts that DTE Electric's argument for its proposed allocation is without a sound basis and is in conflict with ratemaking principles. The Staff urges the Commission to adopt the ALJ's recommendation. Staff's replies to exceptions, p. 22 (citing 8 Tr 5110-5111; PFD, pp. 621-623).

The Commission finds the ALJ's recommendations well-reasoned and supported in the record. Accordingly, the Commission adopts the ALJ's findings and conclusions that uncollectibles should be allocated based on total revenue and not by net write-offs. The Commission agrees with the Staff that allocation on a general basis, such as total revenue, is most appropriate and aligns best with ratemaking principles. *See*, PFD, p. 623; *see also*, Staff's replies to exceptions, p. 22.

F. Streetlight Depreciation Expense

MI-MAUI/Ann Arbor argued that DTE Electric's municipal street lighting rates have greatly increased and that depreciation associated with the company's unreasonably high plant-in-service (PIS) balances is the cause of the increase. MI-MAUI/Ann Arbor argued that the company inaccurately calculated the increase in LED subaccounts at the same rate (14.9%) as other distribution accounts and suggests that a more accurate method of calculating PIS would be to base it on the company's estimates of the number of actual installations, separated into customer-paid high intensity discharge (HID) conversion, new install, or failed mercury vapor (MV) luminaire conversion because the cost of each type of these installations is different. MI-MAUI/Ann Arbor further argued that DTE Electric's use of a standard outage rate for all luminaires fails to take into account that the transition from HID street lighting, that has a higher outage rate, to the installation of LED street lighting, that has a lower outage rate, results in excessive outage costs being attributed to LEDs, making LEDs seem more expensive than they actually are. MI-MAUI/Ann Arbor also argued that DTE Electric purchases and installs luminaires that exceed the application's needs (according to the manufacturer recommendations) leading to an inflated PIS balance. MI-MAUI/Ann Arbor continued that newly installed LED lights should have a lower depreciation rate due to the customer contribution that is required for installation; whereas there is no customer contribution required for HID light installation. Use of a standard rate results in LED light classes subsidizing HID installation. 8 Tr 3443-3445.

MI-MAUI/Ann Arbor opined that the Commission should: (1) order DTE Electric to calculate test-year depreciation expense through use of PIS balances for all 373 subaccounts from the year 2020, (2) deny DTE Electric's requested depreciation expense increases that are attributable to PIS increases, and (3) order an audit of DTE Electric's historic PIS balances, that includes, among other things, an examination of whether capitalization of outage costs and customer contributions are reasonable. 8 Tr 3445-3446.

On rebuttal, DTE Electric explained that the older lights being removed are cheaper than the new lights that replace them; however, MI-MAUI/Ann Arbor asserted that this argument is not consistent with the company's valuation approach nor does it explain why underground HID plant balances have fallen more than have overhead HID plant balances. MI-MAUI/Ann Arbor's initial brief, pp. 55-56; *see also*, 8 Tr 3438-3439. As evidence of the dissonance in the number of HID luminaires and plant balances, MI-MAUI/Ann Arbor submitted a chart that indicates HID luminaires in use have fallen by 43% over the years 2018 through 2023 while plant balances per luminaire have increased 46%. *See*, MI-MAUI/Ann Arbor's initial brief, p. 57; *see also*, 8 Tr 3434-3436. MI-MAUI/Ann Arbor opined that the Commission "could order [DTE Electric] to calculate test-year depreciation expense for HID luminaire subaccounts using the Company's projected HID luminaire counts and the 2018 PIS balances as a baseline." MI-MAUI/Ann Arbor's initial brief, pp. 58-59 (citing 8 Tr 3438). MI-MAUI/Ann Arbor asserted that it would be reasonable, appropriate, and prudent if their proposal leads to customers with increasing PIS paying more for their property than would customers whose PIS are decreasing. MI-MAUI/Ann Arbor's initial brief, p. 60.

The Staff disagreed with MI-MAUI/Ann Arbor's assertion that it is acceptable for customers to pay costs for which they are not responsible. Accordingly, the Staff advised that the Commission should reject MI-MAUI/Ann Arbor's suggestion. Staff's initial brief, pp. 261-262 (citing 8 Tr 5162).

DTE Electric rebutted MI-MAUI/Ann Arbor's position, stating that "[c]alculating test-year depreciation expense for lighting 373 subaccounts using 2020 historic PIS would be arbitrary and inconsistent with how it is calculated for other distribution assets. It would result in proposed rates that are not cost-based because depreciation expense would not be based on test-year projections." 7 Tr 1745. DTE Electric also denied MI-MAUI/Ann Arbor's argument that any lack of proportional decline in luminaires compared to PIS balances means that the company has incorrectly stated its historic PIS balances. DTE Electric countered that there could be a number of reasons for this occurrence such as the increasing purchase cost of new luminaires and older luminaires (with a lower purchase cost) being taken out of service. 7 Tr 1745-1746.

The ALJ recommended that the Commission should initiate further study of DTE Electric's capital investments but did not find that the company's presentation rose to the level of requiring a disallowance in the instant case (without prejudice to such a finding in future cases). The ALJ opined that a review of the company's plant balances would be preferable to limiting depreciation in the instant case because an examination of depreciation only would be unlikely to reveal problems with DTE Electric's plant balances. The ALJ recommended that the Staff, DTE Electric, and MI-MAUI/Ann Arbor continue to work together to ascertain the accuracy of plant balances that are based on capital investments and the allocation of such investments to the many lighting accounts. The ALJ also suggested that the Commission consider directing DTE Electric to file a new depreciation case in 2023 to provide transparency into the useful life of street lighting assets. PFD, pp. 626-627.

MI-MAUI/Ann Arbor except to the ALJ's adoption of DTE Electric's proposed street lighting depreciation, arguing that the Commission does not have the authority to approve rates based on information, the calculations of which are concerning. MI-MAUI/Ann Arbor assert that their argument that DTE Electric's rate increase is based on its suspect depreciation calculation on PIS is unchallenged and requests that the Commission require the company "to continue its past practice of projecting test-year depreciation by adding marginal depreciation expense to depreciation costs already included in rates . . . rather than accept DTE [Electric]'s current calculations in this case, which are based on plant balances that conflict sharply with the Company's testimony about streetlighting assets." MI-MAUI/Ann Arbor's exceptions, p. 8; *see also*, *id*., pp. 8-13.

DTE Electric excepts to the ALJ's suggestion that the Commission should require the company to file a new depreciation case in 2023 to provide transparency into the useful life of street lighting assets. The company argues that its current depreciation rates were approved in the December 6, 2018 order in Case No. U-18150 (December 6 order) which approved a settlement agreement that included terms that a new depreciation case would be filed not later than December 2024 and would be based on December 31, 2023, plant balances. DTE Electric's exceptions, p. 119; *see also*, December 6 order, p. 2.

MNSC notes in its exceptions that it supports an investigation into DTE Electric's capitalization accounting practices, opining that an investigation would require more transparency and accountability than a workgroup. MNSC's exceptions, pp. 6-9.

In their replies, MI-MAUI/Ann Arbor argue that DTE Electric's reliance on the settlement approved in the December 6 order is misplaced because the of company's inaccuracies in depreciation and LED/HID values submitted in the instant case. Additionally, MI-MAUI/Ann Arbor aver that there exists no statutory requirement for the Commission to adhere to the decision reached in a deprecation proceeding. MI-MAUI/Ann Arbor's replies to exceptions, pp. 2-3.

The Commission agrees with the ALJ that concerns over DTE Electric's capitalization accounting practices do not rise to the level of requiring a disallowance of the street lighting depreciation expense. However, the Commission respectfully disagrees that it should order a depreciation filing in 2023. The settlement agreement approved in the December 6 order set the terms of DTE Electric's next depreciation filing as being not later than December 2024 and based on December 31, 2023 plant balances. *See*, December 6 order. Settlement negotiations are entered into with the expectation and trust that the parties will meet the terms of the final agreement. The parties to this proceeding have not offered evidence or argument to establish that the Commission should order a depreciation filing on an earlier timeline and basis than was agreed to by the parties to the settlement.

However, the Commission shares the concerns expressed by the parties to this proceeding about DTE Electric's capitalization accounting procedures and wants to see greater transparency but finds that, in the 10-month rate case timeline, it is not possible to delve as deeply into problematic issues as may be possible through other means. DTE Electric's capitalization issues are addressed in the discussion of Future Rate Cases, Further Study, Capitalization Practices, below.

X. RATE DESIGN AND TARIFFS

A. Residential

1. Time of Use Rates

The ALJ begins with a thorough recitation of the history of DTE Electric's TOU residential rates. PFD, pp. 627-638. In Case No. U-18255, the Commission directed DTE Electric, in its next general rate case, to file tariffs eliminating the summer monthly block rate and replacing it with an on-peak/off-peak rate with an opt-out provision for non-AMI customers. On rehearing in Case No. U-18255, the Commission recognized the significant change of its previous order and stated that implementation of the April 18 order would be considered. June 28, 2018 order in Case No. U-18255, pp. 7-8. In the May 2 order, DTE Electric's next general rate case, the Commission declined the company's request to reverse its decision in Case No. U-18255, but altered the implementation schedule to allow for pilot programs and system development to support a smooth, cost-effective transition. May 2 order, pp. 152-154. In the May 2 order, the Commission also declined to adopt the Staff's recommendation for DTE Electric to use summer on-peak pricing differentials for non-capacity charges and to apply the changes to the capacity portion and, instead, directed the on-peak capacity and non-capacity rates to be tested as a combination rate and implemented through pilots. *Id*., pp. 157, 161-162. The Commission also ordered DTE Electric to implement according to the following plan and schedule:

> In this case, planning for phase one would begin in December 2018, and would require 21 months to develop requirements, deploy the potential solutions, and allow for testing. Phase one of the Recommended Plan includes piloting up to 5,000 targeted customers per rate tested. Participants for the pilot will be targeted using the Company's customer segmentation research to ensure wide and varied participation. The pilot implementation would begin in June of 2020 and run through September 2020, after which it would be assessed and findings from the pilot will be implemented into the process for full implementation. Planning for phase two, full implementation, would begin in September 2020. This phase would require 21 months to gather requirements, develop and integrate with the billing

> system, and test the solutions. Residential customers who do not choose other rate options would be transferred to a new summer on-peak rate on May 30, 2022 on a bill cycle basis.

Exhibit S-16.1 in Case No. U-20162, filing #U-20162-0436, p. 2.

DTE Electric filed its next general rate case application on July 8, 2019 in Case No. U-20561 followed by an application in Case No. U-20602 requesting *ex parte* approval of its ACPP inclusive of six separate TOU pilot rates. PFD, p. 633. The Commission approved two of the pilots in Case No. U-20602, directed the company to file revised estimates of the costs for its deferred accounting request, and then issued an order on November 14, 2019, approving the company's revised deferred accounting request. *See*, September 26, 2019 order in Case No. U-20602, pp. 3-4; November 14, 2019 order in Case No. U-20602, pp. 2-3. In the May 8 order, the Commission declined to adopt the Staff's recommendation to approve a summer on-peak rate to be effective in May 2022, and instead continued the pilots and held off on approving the Staff's rate design until the two pilots had yielded initial results. May 8, 2020 order, pp. 246-247. On June 17, 2020, DTE Electric filed an application in Case No. U-20602 asking for an extension to implement the summer on-peak rate for capacity and non-capacity charges and the two pilots approved in Case No. U-20602, citing impacts of COVID-19. The Commission approved the extension in the February 4, 2021 order. *See*, February 4, 2021 order in Case No. U-20602, pp. 5-6.

Coming to the instant case, DTE Electric proposed a plan for implementing its residential TOU rate and described its rates as follows:

> Rate Schedules D1-A and D1-B both vary by time of day and by season. Both have an on-peak period consisting of 3:00 pm to 7:00 pm, Monday-Friday (with an off-peak period consisting of all other times), and on-peak rates which are different for June-September versus October-May.
>
> D1-A was designed with a power supply non-capacity rate that varies by time and month as described above. The power supply non-capacity rate differential

> between on-peak and off-peak is derived from differences in historical Locational Marginal Prices (LMPs) for the corresponding seasonal and intraday periods. The power supply capacity rate is a "flat" per kWh [kilowatt-hour] energy charge, meaning the per kWh price remains constant throughout the year and does not vary based on the time of the day, the day of the month, or the month of the year.
>
> D1-B was designed with both power supply non-capacity and capacity rates that vary by time and month as described above. The differential between on peak and off peak are again based on historical locational marginal prices for the corresponding seasonal and intraday periods. However, instead of being based on the absolute difference between the different LMPs, the difference is based on the relative difference.
>
> Customers offered these pilot rates on an opt-in basis began enrolling on the rate in March 2021. The rates became effective for customers being offered them on an opt-out basis in April 2021. The pilot is ongoing at the time of this filing.

6 Tr 1136-1137.

DTE Electric explained that it proposes full implementation of TOU rates using the proposed Rate Schedule D1.11 (Residential Service Rate – Standard TOU), which mirrors the structure of the D1-A rate of the Residential Advanced Pricing Pilot A, TOU I that was tested during the ACPP. 6 Tr 1137. The D1.11 rate would replace the inverted block structure for recovery of capacity costs with a flat per kWh charge, recover the non-capacity power supply costs through a TOU structure, and would be implemented year-round (as opposed to only during summer months), although the rate uses different differentials for summer and non-summer months. 6 Tr 1138-1139, 1141-1142. The company also explained its customer transition strategy and inclusion of an opt-out provision in its proposal. 6 Tr 1146-1148. As to costs of the D1.11 proposed rate, DTE Electric provided the one-time capital costs to be $31.7 million and the one-time O&M costs to be $17.1 million. 6 Tr 1152.

GLREA, the CEOs, MNSC, the Staff, and the Attorney General addressed DTE Electric's proposed D1.11 TOU rate. GLREA asserted that the cost differentials proposed by the company did not reflect the differences in the cost of capacity or delivery and recommended that the

Commission require DTE Electric to redesign its rates to recover all, or more, of the capacity costs from on-peak usage. 8 Tr 3233-3240. The CEOs contended that DTE Electric failed to support its assumption that 3% of customers would shift their load usage from on-peak to off-peak periods and recommended that the Commission use the 0.4% shift experienced during the pilots and direct the company to redesign the rate to increase the TOU differential to better reflect the underlying cost or providing energy during peak hours. 8 Tr 3584-3587. MNSC characterized the D1.11 proposal as a step in the right direction but recommended that the Commission require DTE Electric in its next rate case to redesign the proposed rate to collect capacity and distribution costs through a TOU rate design. 8 Tr 3852-3855.

The Staff addressed the company's proposed recovery of capacity costs and contended that, rather than a demand-based rate, the more appropriate way to collect capacity costs is through time-varying rates or through rates that are 50% higher in the summer on-peak period. 8 Tr 5134. The Staff then disputed the company's assertion that if the differentials are altered, the billing determinants should also be altered and recommended the use of the percentage difference in LMP prices, rather than the absolute difference, in setting the peak rate differential. 8 Tr 5135-5136. The Staff also presented and recommended approval (with the modifications proposed by the Staff) of the company's alternative TOU full implementation proposal that was less expensive and corrected several deficiencies. 8 Tr 5137; Exhibits S-23.00 and S-23.01. The Staff presented the revised cost estimate associated with the alternative proposal.

In rebuttal, DTE Electric expressed that it did not oppose applying TOU pricing to power supply capacity rates and the use of the alternative TOU proposal, although the company disagreed with the Staff's preference for a summer-only on-peak rate for capacity costs. 6 Tr 971-972. The company added that the CEOs' argument regarding the 3% shift made assumptions based on the company's initial TOU proposal and that the 3% shift is properly applied to the alternative TOU proposal. 6 Tr 977-978. The Attorney General objected to DTE Electric's alternative proposal stating that it had not been sufficiently vetted and was presented too late in the proceeding. Attorney General's initial brief, p. 69. The CEOs similarly argued that the alternative proposal could not be properly evaluated. CEOs' initial brief, p. 19.

The ALJ concluded that DTE Electric had not presented an approvable TOU rate, explaining that the company's initial proposal had an unexplained and unjustified cost estimate and a projected load shift that it could not explain. PFD, p. 651. Turning to the alternative proposal, the ALJ first faulted the absence of an opt-out provision in the alternative proposal, which was required by the Commission in Case No. U-20602. *Id*., pp. 651-652. The ALJ stated that the company also failed to present a revised tariff for the alternative proposal, a revised tariff to limit the current Rate Schedule D1.1 only to AMI opt-out customers, or a comparison of bills at present rates. *Id*., p. 652. Citing the February 4, 2021 order in Case No. U-20602, where the Commission emphasized the importance of engaging with stakeholders in the pilot process, the ALJ observed that there was no effort by the company to include stakeholders in the development of the alternative proposal. PFD, p. 653 (citing the February 4, 2021 order in Case No. U-20602, pp. 5-6). Turning to the cost estimates, the ALJ stated that DTE Electric made no effort to justify its initial or revised TOU proposals pointing to the Staff's Exhibit S-23.01 where DTE Electric's cost projection for customer outreach shifted from $8.1 million in the initial proposal to $5.1 million in the alternative proposal with no explanation. PFD, pp. 653-654. The ALJ contended that, "[w]ith no justification for the revised projections, the company's revised costs could merely reflect a second look at its initial projections in light of [the Attorney General's] testimony and in anticipation of additional scrutiny from the Commission[.]" *Id*., p. 654.

The ALJ recommended that the Commission delay implementation of the full TOU rates and to direct DTE Electric to file a one-year review of the pilot programs and to engage with stakeholders on the design of a full TOU rate. The ALJ also recommended that:

> the Commission require DTE [Electric] to provide the basis for each of the cost estimates it provided the Commission regarding work related to time of use rates, including the cost estimates in Mr. Serna's affidavits in Case No. U-20602, in its IT business cases presented in this case and in Case No. U-20561, and in Mr. Foley's, Mr. Sparks' and Mr. Burns' testimony in this case. Future cost estimates accompanying a full time-of-use rate proposal should be accompanied by detailed cost estimates with vendor bid results and a detailed transition plan including educational and marketing materials.

PFD, pp. 654-655. However, should the Commission decide to approve a full TOU rate, the ALJ recommended that the Commission approve the company's initial proposal with the pilot result of a 0.4% load shift, grant deferred accounting for its capital and O&M costs (subject to a review for reasonableness and prudence), and require the cost justification outlined by the ALJ above. *Id.*, p. 655.

GLREA takes exception to the PFD contending that delayed implementation of a TOU rate is not an appropriate remedy because, with DTE Electric's repeated history of filing "questionable proposals and cost estimates[,]" there is no assurance that the company's next proposal will be acceptable. GLREA's exceptions, p. 1. GLREA argues that the absence of a default TOU rate violates Section 111(3) of the Public Utility Regulatory Policies Act of 1978, PL 95–617; 92 Stat 3117 (PURPA) and asks the Commission to direct DTE Electric to implement the company's alternative proposal but with an opt-out provision. Per GLREA, implementation should also be subject to the condition that DTE Electric provide credible justification for implementation cost estimates. *Id.*, pp. 1-2.

The Staff excepts to the ALJ's recommendation and addresses the claims on which the ALJ based her recommendation. First, citing the ALJ's claim that DTE Electric did not present an approvable TOU rate, the Staff states that the ALJ proposed reasonable solutions to the deficiencies she identified in DTE Electric's initial proposal. Those solutions include granting deferred accounting treatment of costs subject to a reasonableness and prudence review and incorporating the load shift from the initial pilot. Staff's exceptions, p. 12. Secondly, while the Staff supports the alternative proposal without an opt-out provision (as it is similar to Consumers' rate), should the Commission find one appropriate, it could approve the alternative proposal with an opt-out provision. *Id*., pp. 12-13. Third, the ALJ's issue with the lack of a revised tariff is easily remedied, according to the Staff, by the Commission incorporating the modifications provided on record into the tariffs approved with the final order in this case, as the Commission often does. *Id*., p. 13. Lastly, the Staff responds to the ALJ's conclusion that the alternative proposal appears not to have involved stakeholders with some parties opposing it and that it should be rejected based on the Commission's guidance on pilots. The Staff explains that the alternative proposal is not a pilot. Further, the Staff states that the ALJ seems to set an unworkable requirement for all parties to agree on and be consulted with respect to utility proposals. The Staff contends that the rate case proceeding is the proper venue for proposals that allows parties to voice their opinions. Thus, the Staff asks that the Commission approve the alternative TOU proposal, or as modified by the ALJ's recommendation for deferred accounting and the load shift. *Id*., pp. 13-14.

DTE Electric also takes exception to the ALJ's recommendation to delay implementation of the TOU rate arguing that delay leads to unnecessary costs and administrative burdens. DTE Electric's exceptions, p. 209. The company maintains that its cost projections for full TOU implementation are accurate and consist of $31.7 million of capital costs for Customer IT, and $17.1 million of O&M costs ($8.1 million for customer outreach, $4.9 million for customer service, and $4.1 million for Customer IT). *Id*., pp. 209-210 (citing 6 Tr 1151-1152; 7 Tr 2498; and Exhibit A-13, Schedule C5.9.2, lines 9-12, column (e)). The alternative TOU full implementation costs are projected to be $19.5 million in capital costs and $11.9 million in one-time O&M for 2022 and 2023. DTE Electric's exceptions, p. 210 (citing Exhibit S-23.00, pp. 3-4).

Turning to the ALJ's 0.4% load shift recommendation, DTE Electric disagreed with the CEOs' testimony and argued that the company's proposed 3% shift from on-peak to off-peak in its proposed D1.11 and D1.12 TOU rates is reasonable because it is based on preliminary pilots in Michigan and considers the dynamics of rate implementation impacts on all residential customers versus the results of a managed pilot. The company further states that following implementation of the D1.11 TOU rate, it will propose billing determinants based on actual and observed data. DTE Electric's exceptions, p. 210. DTE Electric then describes the opt-out provision in its initially proposed D1.11 rate that communicates the option for D1 customers to opt out of the transition to the D1.11 rate and then describes how the alternative proposal utilizes a mandatory enrollment strategy in contrast to the opt-out strategy. DTE Electric adds that the D1.11 rate would be the default rate for new residential customers and customers changing premises. The company requests that its initially proposed D1.11 rate or the alternative TOU implementation proposal be approved with the corresponding contract term language set out in Exhibit A-16, Schedule F8, sheet D-2.00, which reflects the default nature of the rate. *Id*., pp. 211-212.

In its replies to exceptions, the Staff disputes DTE Electric's claim in exceptions that the company's proposed 3% load shift is conservative and reasonable. The Staff states that the company's assertion is "misleading at best" and that the 0.4% load shift recommended by the ALJ is based on pilot results, while 3% was not. The Staff also notes that the company claimed billing determinants would need to be adjusted if a different TOU rate design is approved, which the Staff rejects. The Staff recommends that the Commission also reject the company's claimed support for the 3% load shift and billing determinants claim. Staff's replies to exceptions, p. 27.

The CEOs repeat their arguments disputing DTE Electric's 3% load shift and contend that, contrary to the company's position in its initial brief and exceptions, the number of participating customers will have no effect on the company's ability to achieve a percentage of load shift. The CEOs conclude that there is no quantitative analysis on the record supporting DTE Electric's proposed load shift and recommend that the Commission reject it. CEOs' replies to exceptions, pp. 1-3.

In its replies to exceptions, DTE Electric restates its support for Commission approval of the company's original or alternative TOU proposal but notes that any modification by the Commission may alter the company's plans and timing for implementation. The company repeats its disagreement with the 0.4% load shift and states that, in a future rate case, it will propose billing determinants based on actual and observed data. DTE Electric's replies to exceptions, pp. 81-82.

MNSC supports the approval of the alternative TOU proposal with an opt-out provision (which provides a safety net for customers that will be migrated to the new rate), deferred accounting (which provides a safety net to customers that will bear the transition costs), and the 0.4% load shift in its replies to exceptions. MNSC adds that, while it is not the ideal way to roll out a default rate, the alternative TOU proposal is a reasonable path forward. MNSC's replies to exceptions, pp. 69-71. MNSC recounts some of the decade-long history of the work that has gone into developing a residential TOU rate and states that the proposals presented in this case are "a long time coming." MNSC's replies to exceptions, p. 71.

In reviewing the history behind the development of a residential TOU rate, as stated aptly by MNSC in its replies to exceptions, the implementation of a residential TOU rate is a long time coming. DTE Electric, the Staff, and stakeholders have been working towards a viable TOU rate for many years. The Commission agrees with DTE Electric, the Staff, GLREA, and MNSC that delaying implementation is not in the best interests of ratepayers and finds that approval of the alternative TOU proposal described in Exhibit S-23.00, with the modifications described below, is reasonable and supported by the record.

For clarity purposes, the Commission identifies and explains the following elements of the alternative TOU proposal and modifications thereto that it finds to be reasonable:

1. The alternative TOU rate shall apply TOU pricing to both non-capacity and capacity portions of the power supply rate (described further below), which mimics the D1-B rate approved in the company's ACPP.

2. The alternative TOU rate shall apply year-round with an on-peak rate, but pricing shall be determined separately for summer and non-summer periods.

3. The alternative TOU rate shall use the mandatory enrollment strategy with 60 days' notice and with an exemption for the company's AMI opt-out customers as described in Exhibit S-23.00, pp. 1-2. The Commission notes that the mandatory enrollment strategy employed by the company must comply with the provisions of MCL 460.1183(1) for legacy net metering customers.[58]

4. The alternative TOU rate shall be based on determinants assuming a 0.4% peak shift. The Commission agrees with the ALJ and intervenors that the company did not adequately support its proposed 3% shift peak. *See*, 8 Tr 3584-3585, 5135-5136.

5. While the Staff advocated for capacity costs to be collected through rates that are 50% higher in the summer, the Commission agrees with the Staff's acquiescence to DTE Electric's position. Thus, the Commission finds reasonable DTE Electric's proposal for varying power supply capacity and non-capacity rates by the percentage difference in

[58] MCL 460.1183(1) provides as follows: "A customer participating in a net metering program approved by the commission before the commission establishes a tariff pursuant to section 6a(14) of 1939 PA 3, MCL 460.6a, may elect to continue to receive service under the terms and conditions of that program for up to 10 years from the date of enrollment."

LMPs. *See*, 6 Tr 971-972.

The Commission agrees with the Staff, contrary to DTE Electric's contention, that there is no need for adjustments to the company's billing determinants based on the modifications to the alternative TOU described above (although, the Commission expects the company in future cases to propose adjustments to these billing determinants based on actual and observed data). As to the costs, the Commission finds the $19.5 million in capital costs and the $11.9 million in one-time O&M costs in 2022 and 2023 to be reasonable and supported and finds that approval of deferred accounting treatment, subject to a review for reasonableness and prudence, related to the implementation of the alternative TOU proposal addresses the cost concerns of many of the intervening parties and included in the ALJ's PFD. *See*, Exhibit S-23.00, pp. 3-4. The Attorney General and the CEOs argued that the alternative TOU proposal was presented too late in the proceeding to be vetted in a meaningful way. The Commission disagrees. The company's initial TOU proposal was included in its application and the alternative proposal with the Staff's modifications was presented in the Staff's exhibits and direct testimony following discovery. The Commission finds the time allowed in this proceeding was adequate for all parties to fully evaluate and litigate the alternative TOU proposal.

Lastly, regarding the ALJ's issue with DTE Electric failing to file a revised tariff reflecting the alternative TOU proposal, the Commission finds that the description of the alternative TOU proposal and the modifications thereto that the Commission finds reasonable are sufficient for all parties to have a clear understanding of what is being approved. Therefore, the Commission declines to adopt the ALJ's recommendation and instead adopts her alternative recommendation and approves the alternative TOU proposal, as described in this order.

2. Billing Determinants (Other)

In their initial brief, the CEOs took issue with DTE Electric's forecasted billing determinants stating that they had been adjusted too low and may result in overearning for the company. CEOs' initial brief, pp. 23-24 (citing 8 Tr 3593). The CEOs explained that:

> [e]ssentially, the Company started from the assumption that residential sales would decrease by 594,343 MWh in the test year. Then the Company worked through all of the forecasts for each rate and tariff. Those adjustments left the company with an 883,654 MWh discrepancy between their overall forecast, and their class-by-class forecast. This discrepancy was applied to the D1 rate schedule as [a] "plug," to make the Company's forecasts even out.

CEOs' initial brief, p. 24. Noting that DTE Electric's adjustment is equal to 6% of the historic year D1 rate schedule sales, the CEOs explain that a 1% underprojection of the D1 billing determinants is equal to a $24 million overprojection of rates. 8 Tr 3595-3596. The CEOs recommend that the Commission require DTE Electric to spread the reduction in usage it attributes to the post-COVID environment to all residential rate schedules, update its forecasting to reflect work-from-home trends, and update its D1 rates to reflect an accurate adjustment in usage. CEOs' initial brief, pp. 27-28.

In rebuttal, DTE Electric averred that its method to allocate residential sales is consistent with the most recently approved method in Case No. U-20561 and testified that the difference between the proration method suggested by the CEOs and the method used by the company is minor since the D1.1 rate schedule includes 90% of all DTE Electric customers. 6 Tr 979-980.

The ALJ recommended that the CEOs' recommendation be adopted in so far as it spreads the additional sales reductions across the other residential rate schedules. PFD, pp. 657-658. The ALJ contended that the company is capable of making such a modification, "since [it] was able to identify the magnitude, and did not dispute that DTE [Electric] spread other adjustments to the different rate schedules." *Id.*, p. 658.

DTE Electric takes exception to the ALJ's recommendation and explains that its unbundled COS studies, including its cost allocation methods, are consistent with methods approved in Case No. U-20561. The company disagrees with the CEOs' approach pointing that the CEOs found no flaw in the company's method except that COVID-19 created abnormal usage in 2020. DTE Electric states that, nonetheless, its forecasting was accurate as the ALJ acknowledged on page 462 of the PFD. DTE Electric's exceptions, pp. 212-213. Regarding the per capita change to D1 usage of 8.2% suggested by the CEOs, DTE Electric states that it is substantially similar to the company's 7.03% per capita change across the full residential forecast and claims that neither the CEOs or the ALJ explained why the CEOs' sales allocation method was more accurate or appropriate. *Id*., p. 213. The company further states that the ALJ ignored the fact that much of the CEOs' discussion was based on an indirect challenge to the DTE Electric's sales forecast presented by a witness without the qualifications to challenge the company's forecasting expert. Thus, DTE Electric asks the Commission to reject the PFD and approve DTE Electric's allocation methodology. *Id*., p. 214.

In replies to exceptions, the CEOs refer to their arguments made in testimony and briefing in response to the company's exceptions. The CEOs also point out that it cited to articles which refute the company's assertion in exceptions that the CEOs failed to support their claims regarding the continuation of work from home. CEOs' replies to exceptions, pp. 3-4 (citing 8 Tr 3597 and CEOs' initial brief, p. 27). The CEOs repeat the potential consequences of DTE Electric over-earning as a result of the company's flawed billing determinants and ask the Commission to affirm the PFD. CEOs' replies to exceptions, pp. 4-5.

The Commission finds the ALJ's recommendation to be well-reasoned and supported by the record. The company did not dispute that it is able to make the adjustment to the additional sales reductions across the other residential rate schedules as recommended by the ALJ or contend that the ALJ's suggestion is incompatible with the forecasting method approved in Case No. U-20561. *See*, 8 Tr 3593-3596.

3. Residential Income Assistance and Low-Income Assistance Tariffs

In its direct case, DTE Electric proposed changes to the RIA and LIA tariffs to standardize and clarify parts of the tariff. 5 Tr 816-818; Exhibit A-16, Schedule F8. The Staff took issue with the company's tariff changes regarding the company's reservation of 5,000 LIA spaces for senior citizen customers and recommended that, absent a compelling priority, the assignment of LIA credits to eligible customers should be randomized. 8 Tr 5272-5273. The Staff also disputed the company's RIA/LIA customer participation numbers, alleging that the company over-projected its enrollment numbers and therefore, the Staff recommended that the company round up its total monthly enrollment to 65,000 for the RIA and LIA credits with a corresponding upward adjustment to sales revenue totaling $2,587,050. 8 Tr 5273-5277. DTE Electric objected to the Staff's disputes with the RIA and LIA tariffs and asked that the Staff's changes be rejected. 5 Tr 833-834.

The DAAOs also took issue with the LIA credits asserting that the company is artificially and unnecessarily limiting the number of participants receiving the LIA credit. Responding to the Staff's proposal regarding enrollment projections, the DAAOs argued that the solution is not to stymie enrollment but rather to ensure that DTE Electric establish that all eligible customers can be enrolled and that the company provide accurate data to protect against overcharging. DAAOs' initial brief, pp. 48-49.

The ALJ agreed that the Staff and the DAAOs raised reasonable concerns with DTE Electric's administration of the RIA and LIA programs considering the company's resistance to providing

RIA and LIA enrollment data separately, the company's objection to the Staff's assumption that the company would permit LIA enrollment up to the cap level, and the assertion that the company is not fully utilizing LIA credits. The ALJ recommended that the company file a report detailing its current approach to enrolling customers in the LIA credit program with current enrollment data from 2021 and 2022 (to date). Following this report, the parties should discuss the enrollment assignment and the enrollment cap in the Energy Affordability and Accessibility Collaborative (EAAC). The ALJ found the other clarifying changes proposed by DTE Electric and the Staff unnecessary to address at this time. PFD, p. 662.

The ALJ also addressed the DAAOs' concerns with the LIA credit, namely: "(1) the LIA credits should be tailored to customers' income and usage rather than a flat rate; (2) the dollar amount of the LIA credit is too low; and (3) the number of potential enrollments in the LIA credit program is capped too low." *Id*., pp. 662-663. The ALJ explained that the Staff argued that the DAAOs' suggestion to revise the LIA credit is premature while the percentage of income payment plan (PIPP) within the payment stability plan (PSP) pilot is ongoing and that discussion of the LIA enrollment cap and the PSP should be evaluated in the EAAC. The ALJ agreed with the Staff recommendation regarding evaluations being conducted in the EAAC. *Id*., p. 663.

The Staff takes exception to various aspects of the PFD regarding the LIA credit. First, the Staff excepts to the ALJ's dismissal of the Staff's proposed revisions not relating to the random assignment of LIA spaces. The Staff argues that its proposed changes, which it has been working on in *ex parte* cases over the past few years, create uniformity across utilities and include the maximum LIA enrollment figure as well as language pertaining to the treatment of a potential credit balance that aligns with other utilities. The Staff asks the Commission to approve its proposed RIA/LIA tariff language, absent mentions of the Staff's initial proposal to enroll LIA participants randomly and removing DTE Electric's discretion to administer the credit. Staff's exceptions, pp. 15-16.

Second, the Staff excepts to the data the ALJ described as appropriate for DTE Electric to include in the company's LIA credit assessment report and proposes that the EAAC determine the additional data DTE Electric should provide to the Commission. The Staff further excepts to the ALJ's omission of a deadline for DTE Electric to provide the LIA credit assessment report and asks that the Commission require the company to provide any data requested by the ALJ, the Commission, or the EAAC within 30 days of the date of a final order in this case. *Id*., p. 16. Third, the Staff takes exception to the ALJ's recommendation that the EAAC should assess the DAAOs' proposal to tailor the LIA credit to a customer's income and usage. The Staff points to its rebuttal testimony and briefing to show that DTE Electric's PSP already accounts for income and usage in that it is designed to have a customers pay a percentage of their income for energy services. Thus, the Staff argues that it is not necessary for the EAAC to address and request Commission approval to change the LIA credit into a pilot that already exists, especially before the pilot results are analyzed. *Id*., p. 17.

In its exceptions, in response to the ALJ's recommendation, DTE Electric states that it is willing to discuss the RIA/LIA matters but maintains that it has fully supported its proposals in this matter. DTE Electric's exceptions, p. 215.

The DAAOs take exception to the ALJ's recommendation to refer the issue of energy affordability to the EAAC stating that such a pathway shows a lack of urgency when energy affordability is an ongoing crisis for many communities. The DAAOs also take issue with the ALJ's recommendation in that it does not acknowledge the interrelationship between the affordability of infrastructure and access to clean energy and emerging technology. The compartmentalization of these issues creates piecemeal rather than comprehensive solutions and a rate case, “not a siloed set of interminable workgroups[,]” is the proper place to address affordability. DAAOs’ exceptions, p. 4. The DAAOs ask that the Commission open a new docket to address the interrelationship between affordability of power, the quality of infrastructure, and access to clean energy and emerging technology and that the docket explicitly seek input on how integrated solutions should be applied in rate cases, IRPs, and other proceedings. *Id*.

Replying to DTE Electric’s exceptions opposing the Staff’s proposed LIA enrollment tariff revisions, the Staff contends that it is improper for the company to unilaterally determine how LIA enrollment is done and that the Commission must find the details of the LIA program design (with input from the EAAC) to be reasonable. Thus, the Staff asks that the Commission adopt the ALJ’s recommendations with the Staff’s modifications proposed in exceptions. As to the DAAOs’ exceptions, the Staff maintains that the EAAC is the appropriate venue to address energy affordability matters and argues that a new, separate docket dedicated to energy affordability is not supported in this case. Staff’s replies to exceptions, pp. 31-32.

In its replies to exceptions, DTE Electric disagrees with the Staff’s proposal for the Commission to approve an RIA tariff that removes discretion from the company to administer the tariff and points to its testimony on the record in support. DTE Electric’s replies to exceptions, pp. 82-83 (citing 5 Tr 833-834). Also, in reply to the Staff, DTE Electric states that it believes the current data reporting requirements are sufficient and opposes the Staff’s exceptions on this point. The company notes its agreement with the Staff that neither the Commission nor the EAAC need to address the DAAOs’ proposal to change the LIA credit for a current pilot, the results of which have not been analyzed. Next, DTE Electric contends that the DAAOs have not made a proper exception to the PFD and thus, their arguments therein do not warrant consideration. DTE

Electric's replies to exceptions, p. 85. Lastly, DTE Electric requests that any data requested of the company related to RIA/LIA programs be decided in the EAAC process. *Id*., p. 86.

The DAAOs repeat their arguments regarding the LIA credits and their position regarding the urgency surrounding energy affordability issues and ask that the Commission approve the changes proposed in the instant docket or open a separate proceeding to address the challenges related to energy affordability, a high-quality distribution system, and clean energy access. DAAOs' replies to exceptions, pp. 2-3.

Finding the ALJ's recommendations to be well-reasoned and supported by the record, the Commission adopts the ALJ's recommendations regarding the RIA/LIA programs. While the Commission understands the calls for urgency expressed by the DAAOs and recognizes that energy affordability is a critical issue for many DTE Electric ratepayers, the Commission agrees with the ALJ that the EAAC is in the best position to assess the issues of the enrollment assignment and caps as well as potential revisions to the LIA credit. The Commission further finds that a report detailing DTE Electric's current enrollment practices would be informative and beneficial to the EAAC's discussion of the issue. Therefore, the Commission directs DTE Electric to file, within 120 days from the date of this order, a report detailing the company's current approach to enrolling customers in the LIA credit program with current enrollment data from 2021 and 2022 (through the end of 2022). The report shall be filed in Case No. U-20757. Following the submission of DTE Electric's report, the Commission directs the EAAC to initiate, according to a format and schedule set by the collaborative, a stakeholder discussion of the company's report on the enrollment of customers in the LIA credit program and submit a report and recommendations to the Commission.

4. Stable Bill

DTE Electric proposed to add an optional[59] residential demand rate, Rate D1.12, because, although the company proposed two demand residential pilots in Case No. U-20602, the Commission deferred approval of those pilots and therefore, the company does not currently offer a residential rate schedule that uses demand rates or demand-based charges. The company explained that the Rate D1.12, referred to as the "stable bill service level" tariff, would offer residential customers an additional option to reduce their electric bills by allowing customers to stagger their usage to reduce their peak demand and lower their bill by avoiding the use of high-demand electric appliances at the same time. 6 Tr 1152-1153. The company explained the components and mechanics of how the D1.12 rate would operate and stated that participation in the rate would be limited to 10,000 customers beginning in the first quarter of 2024. 6 Tr 1155-1166; Exhibit A-16, Schedule F8, Sheets D-14.08-14.09.

The Staff opposed the D1.12 rate and disagreed with the company's justification for it stating that the rate fails to reflect better cost causation or alignment than the current rate. MNSC was also critical of the rate and characterized the D1.12 rate as inefficient and unjust, stated that it would send improper price signals, and claimed that it would disincentivize the adoption of Level 2 EV chargers. 8 Tr 3853. EIBC/IEI echoed MNSC's criticisms in terms of inefficiency and improper price signals. 8 Tr 4428-4434. The CEOs and GLREA also called for the Commission to reject the D1.12 rate with the CEOs stating that the rate is "not based on cost-causation, is not gradual, and is not actionable." 8 Tr 3565. DTE Electric rebutted the parties' opposition defending the D1.12 rate's structure, asserting that GLREA misunderstands how

[59] Citing DTE Electric's testimony at 6 Tr 935-936, the ALJ noted that the D1.12 rate schedule would not be available to new DG customers. PFD, p. 663, n. 2170.

revenues are allocated in the COSS and stating that the company is open to a TOU demand charge to avoid penalizing off-peak EV charging. 6 Tr 1193-1202.

The ALJ agreed with the Staff, MNSC, the CEOs, EIBC/IEI, and GLREA that the D1.12 rate should be rejected and all associated implementation costs should be disallowed stating that, as testified to by multiple witnesses, the rate is not cost-based and sends inaccurate price signals. The ALJ found persuasive the CEOs' position regarding the COS for the D1.12 rate:

> The primary flaw of the D1.12 rate is that the Company designed the rate around an irrelevant focus on individual customer load factor. The Company's rate design places an improper reliance on its . . . ("COSS") in developing rates, by attempting to "translate classwide cost causation principles from the COSS to individual customers". [sic] Lucas Direct, 8 TR 3572.
>
> The assumption baked into the D1.12 rate is that individual load factors determine "efficient" use of the system. However, the Company's assets are designed to serve many residential customers, not a single individual. Peak demand of any given individual is greatly diluted into the diversified demand that shared distribution and power supply assets serve. Lucas Direct, 8 TR 3574. The Company's cost of service study generally recognizes this, see id at 3574 n. 28, however, DTE [Electric] departed from this foundational principle when developing the D1.12 rate.

PFD, p. 670 (quoting the CEOs' initial brief, pp. 8-9). The ALJ also pointed to the CEOs' further points that the arbitrary cutoff in service levels could easily result in an unreasonable rate for the customer:

> With each new Service Level reached a customer pays an additional $16.61 per month, [Case No.] U-20836 Rate Design Model for Filing.xlsx, however, as explained in more detail in CEO Witness Lucas's testimony, there is no meaningful difference in the costs on the system between a ratepayer with an average peak load of 4.99 kWh and a ratepayer with an average peak load of 5 kWh. This arbitrary cutoff could penalize a customer who uses a de minimis amount of power at the wrong time. As Witness Lucas explained "[i]n this situation, an inadvertent increase of just 0.01 kW in one of the customer's three peak demand hours could push that customer into the next Service Level. If this customer increased their average hourly load by just 10 watts—roughly equal to toasting bread for 30 seconds— during the wrong hour. . . " they could be pushed into the next service level. Lucas Direct, 8 TR 3580-81. "The penalty for enjoying a piece of lukewarm bread that hasn't even been properly toasted? A bill increase of $16.61 per month." Id.

PFD, pp. 670-671 (quoting the CEOs' initial brief, pp. 11-12). Lastly, the ALJ agreed with MNSC that the D1.12 rate is similar to previous fixed bill pricing options that the Commission has rejected with the finding that bill stability can be achieved through the company's BudgetWise billing program. PFD, p. 671.

DTE Electric excepts to the ALJ's rejection of the company's proposed D1.12 rate repeating the arguments and descriptions of the rate made on the record and in briefing in support of the stable bill offering and asks the Commission to approve the rate. DTE Electric's exceptions, pp. 216-218, 220. DTE Electric claims that the criticisms of the D1.12 rate are overstated, specifically arguing in response to the Staff that demand charges are a well-established tool for larger customers and that no party offered a compelling reason why the rate should be rejected. *Id*., pp. 216, 218. The company also disputes that the D1.12 rate is not cost aligned and that the service levels included in the rate are not appropriate stating:

> residential customers do not presently receive any type of direct pricing signal to manage their demand. A broad pricing signal to manage demand at all times would achieve a higher level of cost-alignment than the status quo. The structure of the proposed D1.12 rate is also necessary to achieve the levels of bill stability outlined in [DTE Electric] Witness Foley's testimony which, in turn, would potentially create value for some customers (Foley, 6T[r] 1161, 1194-1197; Exhibit A-45, Schedule JJ2). The Company acknowledges, however, that there are multiple ways to achieve higher levels of cost-alignment, and would potentially be supportive of alternative demand-based structures if the Commission deemed them appropriate to implement. Therefore, while the Company maintains that its proposed D1.12 rate is appropriate, it would also generally support TOU demand charges as a way to better achieve cost-alignment, although any specific application would need to be closely assessed (Foley, 6 T[r] 1197-1198).

DTE Electric's exceptions, pp. 218-219.

Responding to criticism that the D1.12 rate sends unactionable price signals, the company contends that such criticism is not unique to the D1.12 rate because all rate design involves some level of imprecision. DTE Electric argues that the better path forward is to approve the rate and obtain actual data to inform more robust discussions in the future. *Id*., p. 219. As to GLREA's assertion that the D1.12 rate unjustly enriches the utility, DTE Electric states that GLREA has confused how revenue is collected through COSS and that the D1.12 rate is designed to collect the exact amount of revenue allocated to the D1 class through the COSS making it revenue neutral. *Id*., pp. 219-220.

In its replies to exceptions, EIBC/IEI contend that DTE Electric offered no new or compelling facts in response to the intervenors' positions and the ALJ's recommendation. EIBC/IEI restate the arguments in their reply brief countering DTE Electric's statement that no intervenor offered a compelling argument as to why the stable bill rate should not be implemented. EIBC/IEI's replies to exceptions, p. 5 (citing EIBC/IEI's reply brief, p. 7). Next, replying to DTE Electric's assertion that the stable bill rate is cost aligned, EIBC/IEI contend that the company's exception confuses the issue and explains that encouraging individual residential customers to manage their individual non-coincident peak will have less impact on the aggregate class peak than TOU rates would in reducing coincident peak demand. EIBC/IEI's replies to exceptions, p. 6. Lastly, speaking to the company's arguments on the rate's price signals and how all rate design involves a level of imprecision, EIBC/IEI clarify that the rate would encourage wasteful use of service "by effectively reducing the marginal cost of demand below the fixed service level to zero—even if that demand occurs during peak times that drive system costs[.]" *Id*. (quoting EIBC/IEI's initial brief, pp. 47-48). EIBC/IEI repeat their argument that TOU rates are more effective and produce more actionable price signals and asks the Commission to adopt the ALJ's recommendation. EIBC/IEI's replies to exceptions, p. 7.

GLREA argues in its replies to exceptions that DTE Electric's exceptions on the D1.12 rate are incorrect and should be rejected. GLREA repeats its arguments on the record and responds specifically to the company's claims in exceptions that some measures of demand drive costs but that residential customer NCP demand (the basis for the D1.12 rate) drive very little costs. GLREA's replies to exceptions, pp. 1-2.

In reply, GLREA argues that:

> DTE [Electric] simply fails to recognize the important difference between the costs and rates applicable to large industrial customers in comparison to the residential class of customers. Because residential customers share distribution and other facilities, their demand on such facilities must be evaluated on an aggregate portfolio basis. While one residential customer may have a high demand for a short period of time, the same customer may at other times cause offsetting low demand. Also, a temporary higher demand from one customer may be offset on a real time basis by other customers sharing the common facilities who may have lower demand. On a combined basis, the peak load demand of a group of residential customers sharing common facilities may remain flat or may reduce overall, resulting in no increased cost impact upon DTE [Electric].

GLREA's replies to exceptions, p. 2.

The Staff states that DTE Electric's exceptions merely restated previous arguments rather than responding to the legitimate criticisms of the D1.12 rate levied by the Staff and intervenors. Referring to the PFD and the record on this issue, the Staff asks that the Commission reject the company's exceptions. Staff's replies to exceptions, p. 28.

The CEOs, in replies to exceptions, describe DTE Electric's exceptions as a recitation of previous arguments that provide no new justification for approval of the D1.12 rate. Citing the ALJ's reasoning and the flaws pointed out by intervenors on the record and in brief, the CEOs repeat that the rate should be rejected. CEOs' replies to exceptions, pp. 5-6.

MNSC replies to DTE Electric's argument in exceptions that its D1.12 rate proposal merits consideration, contending that the company's proposal did in fact receive adequate consideration and was properly criticized and rejected. MNSC avers that the company failed to point to any errors in the ALJ's findings or the concerns regarding the cost penalties to participating customers but merely stated that the intervening parties' criticisms were overstated and then repeated its previous arguments. MNSC's replies to exceptions, pp. 72-74. Responding to DTE Electric's contention that all rate design involves a level of imprecision, MNSC contends that the company understates how imprecise the rate is and that, while the company stated the rate will be voluntary, the company proposed to make it mandatory for DG customers in 2024 and failed to address the disincentive from participating in the DG program the rate would cause. *Id*., pp. 74-75.

The Commission agrees with the ALJ that DTE Electric's proposed D1.12 rate should be rejected. The Commission is not persuaded by the company's justification for the stable bill rate and does not find that the company adequately rebutted the flaws pointed out by the intervenors and the Staff regarding the rate's cost alignment, improper price signals, the rate design's focus on individual customer load factors, and the potential impacts resulting from the rate's cutoff service levels. *See*, 8 Tr 3216-3233, 3565-3599, 3853-3855, and 4428-4434. Finding the ALJ's recommendation to be well-reasoned and supported by the record, the Commission adopts the PFD and declines to approve the company's proposed D1.12 Stable Bill rate.

5. Deposit Requirements

MI-MAUI/Ann Arbor contested DTE Electric's collection for the residential customer deposit program, which operates pursuant to Mich Admin Code, R 460.108-460.112, arguing that the program is more expensive than necessary in that the company collects too large of amounts from too many customers and holds deposits longer than necessary. MI-MAUI/Ann Arbor's initial brief, p. 43. MI-MAUI/Ann Arbor recommended that the Commission reduce the revenue requirement for the deposit program by $600,000 and disallow $16,000 from the revenue requirement for the program to counteract the amounts charged to customers that had not missed payments and who were assessed the deposit because they were unable to show identification. *Id*., p. 44. DTE Electric countered that the testimony relied upon by MI-MAUI/Ann Arbor contained incorrect assumptions and inaccurate data and that the parties failed to account for the benefits produced by the deposit program in reducing uncollectible expenses. DTE Electric's initial brief, p. 253.

The ALJ found that it was not feasible in a 10-month rate case to address potential revisions to the Commission's rules regarding deposits and that the record in this case does not establish discriminatory conduct by DTE Electric or a reason to exclude the deposit program from rates. Therefore, the ALJ recommended that the Commission refer an evaluation of the customer deposits to the EAAC. The ALJ also noted that the Commission's complaint process is available to address specific concerns. PFD, p. 673.

MI-MAUI/Ann Arbor except to the PFD stating that they agree that changes to the Commission's billing rules cannot be done in the context of a rate case and that it did not argue that DTE Electric is violating the existing billing rules. Instead, MI-MAUI/Ann Arbor argue that DTE Electric's deposit system is unreasonably costly because it constantly charges the maximum deposit rather than tailoring the charge to the associated risk. MI-MAUI/Ann Arbor's exceptions, p. 6. MI-MAUI/Ann Arbor repeat and refer to their arguments made in briefing in support. *Id.*, pp. 6-7. Should the Commission adopt the ALJ's recommendation to refer a customer deposit evaluation to the EAAC, MI-MAUI/Ann Arbor ask that the Commission require the following information to be provided by DTE Electric:

• Number and dollar value of residential deposits collected during reporting period, segmented by reason for deposit (with reference to R 460.109(1)(a-h);

• Total uncollectibles prevented by deposits, calculated as the dollar value of deposits withheld in satisfaction of arrearages;

• Interest accrued on all deposits during reporting period;

• Total number and dollar value of residential deposits held at end of reporting period, not including accrued interest;

> • Average and median deposit amounts, expressed in dollars and as percent of system-average monthly residential electric bill;
>
> • Total arrearages aged 91+ days owed by customers with deposits at end of reporting period;
>
> • % of reconnected customers who provided a deposit as a condition of service restoration;
>
> • % of all customer accounts in arrears 91+ days for which the utility is holding deposits, both by count and dollar value, at end of reporting period;
>
> • % of all customers with deposits who received a disconnection notice during the reporting period, and % who were disconnected at least once;
> • Average and median length of time that deposits refunded during the reporting period (one and five years) were held, for customers who met on-time payment requirements or voluntarily closed their accounts; and
>
> • Total deposit refunds during reporting period, both count and value, with dollar value broken down into principal and interest payments.

Id., pp. 7-8.

DTE Electric, in its replies to exceptions, relies on its testimony that pointed out the incorrect assumption MI-MAUI/Ann Arbor relied on to support their arguments and contends that, because MI-MAUI/Ann Arbor have cited nothing in the record to support their proposals for the company's deposit program, MI-MAUI/Ann Arbor have not filed a proper exception to the PFD. DTE Electric also opposes the one- and five-year values for the several metrics suggested by MI-MAUI/Ann Arbor. Incorporating its previous arguments and support, DTE Electric states as follows:

> It would be particularly inappropriate for the Commission to direct the Company to expend effort and money (ultimately with funds arising from customer payments for electric service) to pursue this type of "fishing expedition" proposal, where the record demonstrates that the requesting parties' position lacks merit and relevance (in part because they misconstrued the data they already had, as discussed above), and the requesting parties apparently seeks only to pursue the possibility that if the Company produces enough materials, then they might find some use for something.

DTE Electric's exceptions, pp. 85-86. DTE Electric asks that the nature of any data requested should be decided in the EAAC process. *Id*., p. 86.

The Commission finds the ALJ's recommendation to be well-reasoned and supported by the record in this case and adopts the PFD. The EAAC is more appropriately situated to evaluate the rules pertaining to customer deposits and DTE Electric's implementation and any specific allegations of misconduct may be addressed through the Commission's complaint process.

6. Issues in Contention Not Addressed in the Proposal for Decision

a. Customer Data Disclosure Requirements in Residential and Streetlighting Tariffs

MI-MAUI/Ann Arbor contend that the PFD did not address the issue raised in briefing concerning the amendment of residential and streetlighting tariffs to include customer data disclosure requirements. MI-MAUI/Ann Arbor's exceptions, p. 18. MI-MAUI/Ann Arbor state that DTE Electric has a history of claiming customer data is available to residential and streetlighting customers but then refuses to provide that data. Citing the March 17, 2022 order in Case No. U-20629, in which the Commission stated that streetlighting reporting is pursuant to service agreements handled by specific tariffs, MI-MAUI/Ann Arbor argue that the residential and streetlighting tariffs should therefore be amended to include customer data disclosure requirements. MI-MAUI/Ann Arbor's exceptions, p. 19.

DTE Electric replies that MI-MAUI/Ann Arbor failed to cite anything in the record to support their position or clearly explain their recommendation. Incorporating other areas of discussion in its replies to exceptions, the company states that that MI-MAUI/Ann Arbor's recommendation is unnecessary because: (1) it is based on the premise that all streetlight outages are the result of failed company equipment or unreasonably long repair times, (2) creating data reports for each customer would be unreasonably burdensome, and (3) DTE Electric is already transparent in its system-wide community lighting performance metrics. DTE Electric's replies to exceptions, p. 70 (citing 7 Tr 1766-1767; Exhibit A-25, Schedules O-1 and O-2).

The Commission declines to adopt MI-MAUI/Ann Arbor's recommendations. MI-MAUI/Ann Arbor cite to Sections II and III of their initial brief, which describes customer attempts to receive voltage information and historical use data from DTE Electric and ensuing difficulty in communications with the company, and Section III of their reply brief, which discusses instances where DTE Electric has withheld or made confidential information MI-MAUI/Ann Arbor believe should be made available to customers. Relying on briefing and testimony, MI-MAUI/Ann Arbor ask the Commission to make customer data disclosure requirements explicit in residential and streetlighting tariffs. However, MI-MAUI/Ann Arbor fail to provide any specific language or revisions to the current tariffs or clearly explain their request. The Commission finds MI-MAUI/Ann Arbor's proposal to be vague and insufficiently supported on the record and therefore, declines to adopt their recommendation.

b. Rate D8 Interruptible Rate Tariff

In its exceptions, Energy Michigan explains that it recommended clarifications to the D8 interruptible rate tariff but that the ALJ did not address the issue in the PFD. Energy Michigan's exceptions, p. 5 (citing Energy Michigan's initial brief, pp. 16-17). Energy Michigan states that DTE Electric did not address the D8 rate in its rebuttal testimony and no other party opposed Energy Michigan's proposed clarifications. As such, Energy Michigan requests that the Commission adopt Energy Michigan's proposed changes for the reasons provided on the record. Energy Michigan's exceptions, pp. 5-6.

In its initial brief, DTE Electric explained that it engaged with Energy Michigan, ABATE, the Staff, and other stakeholders to clarify the language describing conditions of interruptions, notices of capacity deficiency and system integrity interruptions, and associated fees and/or penalties. The company stated that its proposed changes only clarified existing terms but did not change them. DTE Electric's initial brief, pp. 255-256 (citing 6 Tr 948-949; Exhibit A-16, Schedule F8).

Energy Michigan, in its initial brief, provided the relevant provision, Notice of System Integrity Interruption, of the D8 tariff, set forth in Exhibit A-16, Schedule F8:

> The customer shall be provided, whenever possible:
>
> 1) notice in advance (generally 1 hour) of probable interruption;
> 2) the time in which customer must fully reduce load, and;
> 3) the estimated duration of the interruption.
>
> The customer shall be provided notice of the actual end time for the system integrity order.

Energy Michigan's initial brief, p. 16 (emphasis and footnote omitted). Energy Michigan explained its proposed change is non-substantive and seeks to move the modifier "whenever possible" so that it applies only to an advance notice of probable interruption. Thus, the provision, shown in strike/bold, would be revised to read as follows:

> The customer shall be provided, ~~whenever possible~~:
>
> 1) notice ***<u>at least 1 hour</u>*** in advance ~~(generally 1 hour)~~ of probable interruption, ***<u>whenever possible</u>***;
> 2) the time in which customer must fully reduce load; and
> 3) the estimated duration of the interruption.
>
> The customer shall be provided notice of the actual end time for the system [ ] integrity order.

Energy Michigan's initial brief, p. 17 (emphasis in original, footnote omitted).

Noting that no party opposed the modification proposed by Energy Michigan and finding that the modification does not substantively change the terms of the D8 tariff, the Commission adopts the revisions to the D8 tariff proposed by DTE Electric inclusive of the changes described by Energy Michigan in its initial brief.

c. Residential Customer Charge

Based on the approved customer charge methodology ordered by the Commission in Case No. U-20561, the Staff asserted that an increase in the company's residential customer charge from \$7.50 per month to \$8.50 per month is warranted. 8 Tr 5110; Exhibit S-6, Schedule F1.4; Staff's initial brief, p. 263.

No party disputed the Staff's proposal. This issue was also unaddressed in the PFD and not raised by any party in exceptions.

The Commission, having reviewed the record, finds the Staff's proposal well-reasoned and supported. 8 Tr 5110; Exhibit S-6, Schedule F1.4; MCL 24.281(3). The Staff's revision includes costs appropriate for collection in the customer charge and is based on the approved customer charge methodology from Case No. U-20561. *See*, May 8 order, pp. 226-228. Further, as stated by the Staff, "[t]his small increase [of \$1 per month], consistent with cost-of-service based rates and the rate design concept of gradualism, could help prevent a larger, more jarring increase in the future." 8 Tr 5110.

B. Commercial and Industrial Rates

1. Power Factors

ABATE took issue with DTE Electric's power factor included in its rates which requires customers to maintain a power factor of 85%, in that ABATE asserts that the company's power factor clause penalizes lower factors as opposed to incentivizing higher power factors. ABATE argued that a credit should be given to primary voltage customers with a monthly power factor greater than 90%, with the credit equal to 0.5% of the billed energy charges, and that there should not be an increase in the penalty for customers with a power factor below 85%. ABATE's initial brief, pp. 73-75.

DTE Electric countered that the credit proposed by ABATE is not warranted. The company argued that customers with a power factor below 100% induce losses and that DTE Electric should not provide credits to customers that continue to induce losses because their losses are relatively less than another customer's losses. DTE Electric's initial brief, p. 194.

The ALJ summarized the parties' positions but did not provide a recommendation on this issue. PFD, pp. 673-674.

DTE Electric takes exception noting that the ALJ did not make a recommendation on this issue and stating that the company agrees with ABATE that a power factor less than the currently approved threshold of 85% imposes a material enough cost to warrant a penalty. However, DTE Electric disagrees that being above the 90% threshold warrants a credit. DTE Electric repeats that the company should not provide credits to customers who continue to induce losses simply because their losses are relatively less than another customer's losses. The company asserts that credits should only be issued for absolute savings to the system because otherwise other customers would subsidize the credit. DTE Electric's exceptions, pp. 220-221.

ABATE also notes the lack of an ALJ recommendation in its exceptions, points to recommendations regarding the power factor set out in its testimony and briefing, and requests that the Commission require DTE Electric to revise its power factor tariff provisions. ABATE's exceptions, p. 10.

ABATE, in its replies, points out that DTE Electric agreed in its exceptions that a power factor less than the current threshold of 85% imposes a material enough cost to warrant a penalty and that, all else being equal, a power factor of 90% reduces losses on the system compared to a class average power factor of 87%. ABATE states that the company's approach is logically inconsistent and fails to encourage customers to reduce system losses and costs. ABATE goes on to argue that the company's admission in exceptions shows that a loss is not a loss and that ABATE's proposal is consistent with the approach taken by Consumers. ABATE asks that the Commission therefore adopt ABATE's proposal. ABATE's replies to exceptions, pp. 13-14.

DTE Electric insists that the Commission should reject ABATE's proposal because ABATE has acknowledged that customers with a power factor of less than one induce losses. DTE Electric then repeats its previously made arguments in opposition to ABATE's position and contends that ABATE's proposed credit threshold is arbitrary and unjustified. DTE Electric's replies to exceptions, p. 103.

The Commission is not persuaded by ABATE's arguments that the company's power factor clause is unreasonable or that it discourages customers from reducing losses. The Commission agrees with the company that a credit is not warranted unless defined, quantified savings are demonstrated, which ABATE has failed to show. Otherwise, the credit will be paid for by other customers. *See*, 6 Tr 997-998. Thus, the Commission declines to adopt ABATE's recommendations.

2. Retail Access Service Rider

DTE Electric proposed three revisions to the Retail Access Service Rider (RASR) tariff, to which Energy Michigan took issue and proposed its own changes for greater clarity. 8 Tr 4489-4493. With two additional changes (a formatting change and adding a reference to Case No. U-15801), DTE Electric accepted Energy Michigan's revisions. 6 Tr 1002-1003. The ALJ stated that the parties appeared to have resolved this issue through briefing, and therefore recommended that the language provided by DTE Electric at 6 Tr 1002 should be adopted. PFD, p. 674.

No party filed exceptions on this issue.

The Commission agrees with the ALJ that the parties have resolved this issue and notes that no party filed exceptions to the ALJ's recommendation. Finding the ALJ's recommendation to be well-reasoned and supported by the record, the Commission adopts DTE Electric's revisions to the RASR tariff, inclusive of Energy Michigan's revisions, set out at 6 Tr 1002-1003.

3. Rider 3

Bloom Energy took issue with the standby rates included in DTE Electric's Rider 3 tariff arguing that the proposed standby rate acts as a barrier to customers adopting Bloom Energy's fuel cell technology in that the rates are complicated, difficult to explain to customers, and not structured with consideration for the capabilities of new technologies. Bloom Energy's initial brief, pp. 4-5. Bloom Energy explained that its fuel cell technology has high availability and capacity factors and, therefore, its standby rates should be calculated based on a generator's forced outage rate (FOR). Bloom Energy argued that the standby rates should also consider the benefits that fuel cell technologies provide to the grid including load modification; reduced need for capacity, energy, and ancillary services; less investment in transmission and distribution systems; and providing volt/var support for changing loads as an NWA, or in microgrids. 8 Tr 4534-4535, 4544-4545.

Bloom Energy recommended that: (1) the Commission require DTE Electric to identify and categorize all forced outages experienced by Rider 3 customers as either customer-initiated or non-customer-initiated; (2) the Commission require DTE Electric to track all non-customer-initiated outages experienced by Rider 3 customers and perform a study to identify the cause of non-customer-initiated outages, improve distribution grid conditions that may be contributing to the outages, and reduce or eliminate these outages; (3) pending the completion of this study, the Commission require DTE Electric to suspend the assessment of Rider 3 distribution charges;

(4) the Commission prohibit DTE Electric from adjusting a Rider 3 standby customer's contract capacity or billing demand based on non-customer initiated forced outages for four hours after an outage begins; and (5) the Commission permit customers with modular systems with availability of 90% or more to contract for less than the full capacity of the self-generation system. Bloom Energy's initial brief, pp. 11-12; *see also*, 8 Tr 4556-4558.

DTE Electric rebutted Bloom Energy's recommendations contending that the recommendation to track the cause of Rider 3 outages would require the disclosure of sensitive business information and that there are a limited number of Rider 3 customer outages. DTE Electric argued that the Rider 3 standby rates are COS-based and eliminating the charge would shift costs on to other customers. Regarding the calculation modification suggested by Bloom Energy, DTE Electric characterized the recommendation as unsupported and added that standby charges are already based on the FOR. DTE Electric's initial brief, pp. 270-274.

The Staff pointed out that Bloom Energy did not quantify any of the benefits of its fuel cell technology and did not explain why other customers should bear the costs of the Rider 3 standby rates that would otherwise be paid by customers with Bloom Energy fuel systems. 8 Tr 5156. Regarding recalculating the capacity costs for systems with 90% or more availability, the Staff argued that there is insufficient evidence for the 90% benchmark and that demand charges should recognize the entire generating system. The Staff further asserted that prorating standby generation capacity based on FOR may be reasonable but prorating distribution capacity based on FOR is not. Thus, the Staff asked the Commission to reject Bloom Energy's changes to Rider 3. 8 Tr 5509-5510.

The ALJ agreed with DTE Electric and the Staff that Bloom Energy's recommendations regarding Rider 3 should be rejected at this time. The ALJ found Bloom Energy's reference to non-customer-initiated outages to be unclear and could apply to outages that were not caused by DTE Electric or the customers, and, therefore, the ALJ stated that a study to determine and classify self-generation outages is unsupported. The ALJ further agreed with the Staff that the Rider 3 power supply rate is already discounted to recognize the unique nature of service to standby customers and that prorating distribution demand charges is not appropriate. However, the ALJ also recommended that the Commission direct DTE Electric to provide a proposal to reduce the reservation fee for fuel cell systems, based on FOR for these systems, or provide justification as to why it is unreasonable to do so. PFD, pp. 684-685.

DTE Electric takes exception to the ALJ's recommendation for the company to provide a proposal to reduce the reservation fee for fuel cell systems based on the FOR for these systems or to provide justification why it is unreasonable to do so. DTE Electric contends that the company and the Staff presented sufficient evidence and reasoning regarding privacy issues, a lack of information on forced outages, and the inappropriate cost shifting proposed by Bloom Energy on the record in this case to justify denial of Bloom Energy's recommendation and to be required to again address the issue in a future, already unwieldy, rate case is unreasonable. DTE Electric's exceptions, pp. 221-222.

Bloom Energy takes exception to the ALJ's rejection of its proposal and argues that its proposal to consider modularity in setting a customer's Rider 3 contract capacity is in line with the goals of MI Power Grid to promote customer engagement and better price signals. Bloom Energy restates its description of how the modular design of it fuel cell generation technology allows for maintenance without shutting the system down and how this feature increases the system's operating time and reliability statistics. Bloom Energy contends that the Staff, DTE Electric, and the ALJ, through her adoption of their position, did not recognize the difference between a modular fuel cell generation and two conventional generators. Bloom Energy thus asserts that the ALJ failed to analyze the issues regarding modularity and to recognize that other jurisdictions have recognized these differences such that they have modified tariffs to enhance the ability of such systems to be adopted. Bloom Energy notes that DTE Electric's concerns of impacts on other customers are unfounded given the company's own admission that it has only averaged 33 Rider 3 customers over the past five years. Presuming one of the ALJ's concerns to be a lack of COS support, Bloom Energy insists that the impact on other customers would be limited by the small number of customers who would use the tariff it proposes and that the number of customers participating could be limited to allow DTE Electric to obtain the data needed to show any benefits claimed by the fuel cell systems. Thus, Bloom Energy asks the Commission to adopt its changes to the Rider 3 tariff. Bloom Energy's exceptions, pp. 1-4.

Bloom Energy also excepts to the ALJ's finding that Bloom Energy's reference to non-customer-caused outages was unclear stating that there is some confusion on Bloom Energy's recommendation. To clarify, Bloom Energy explains that outages that were not customer-initiated should influence the customer's demand calculations, or, "[p]ut another way, customers should not have to pay for increased costs that they did not cause for the system." *Id*., p. 4. Citing cost-causation principles, Bloom Energy asks that the Commission prohibit DTE Electric from adjusting Rider 3 customers' contract capacity or billing demand based on non-customer outages and require DTE Electric to amend the terms of Rider 3 accordingly. As to the ALJ's recommendation for DTE Electric to provide a proposal in its next rate case to reduce the reservation fee for fuel cell systems, Bloom Energy agrees but points out the FOR of customer generation is not being adequately counted due to DTE Electric's failure to distinguish between customer-caused and non-customer-caused outages. Thus, Bloom Energy recommends that the company be required to begin tracking outages on this basis and provide the data in its next rate case filing. *Id*., pp. 4-5.

In its replies to exceptions, the Staff points to its previous arguments and support to aver that the ALJ properly rejected Bloom Energy's proposal. The Staff asks that the Commission adopt the PFD on this issue. Staff's replies to exceptions, pp. 22-23.

DTE Electric disagrees with Bloom Energy's arguments and assertions made in its exceptions. With respect to the standby charges Bloom Energy characterizes as high, the company contends that Bloom Energy offered no quantitative support. The company also opposes the four recommendations made by Bloom Energy in testimony citing customer privacy concerns, a lack of justification provided by Bloom Energy for its requested studies on customer- and non-customer-initiated outages, and the violation of MCL 460.11 (requiring cost-based rates) if the Commission suspended Rider 3 pending the study requested by Bloom Energy. In response to Bloom Energy's suggestion that the Commission prohibit DTE Electric from adjusting Rider 3 customers' contract capacity or billing demand based on non-customer-initiated forced outages, DTE Electric replies as follows:

> The Company recommends that the Commission make no changes to the Rider 3 tariff language because, as discussed above, the Company does not have insight into when, how, or even if Rider 3 generators are in a forced outage state unless customers proactively share that information. There are also no energy-based billing determinants generated when there is a grid outage and no service. The customer's contract capacity and billing demand will not change when there is a service outage. These same reasons apply to the further recommendation to extend the proposed adjustment to the four hours following a grid outage, which also should be rejected because there is no cost basis for such a recommendation. Indeed, the suggested justification is to benefit Bloom [Energy]'s technology, but customers have multiple options for on-site generation if they do not consider Bloom [Energy]'s technology to be appropriate for their energy needs (Willis, 6 [Tr] 985-986).

DTE Electric's replies to exceptions, pp. 88-89. DTE Electric further repeats its previously stated opposition to the proposals made by Bloom Energy citing concerns about cost-shifting to non-Rider 3 customers and the following:

> (1) the distribution system is designed to serve customer peaks whenever they occur, so neither the forced outage rate of a generator nor the timing of those outages is relevant to how distribution charges are designed; (2) [Bloom Energy] witness Jester's attempted analogy to the treatment of power supply capacity for resource adequacy purposes is not germane to distribution system cost recovery and rate design; (3) the Company's distribution rates are designed to recover the full costs of the system; they are not, for any customer, designed on marginal costs as witness Jester proposes, and they are designed on the averages, contrary to witness Jester's customer-specific "additional demand charge"; and (4) the Commission declined to adopt witness Jester's similar proposal in Case No. U-20162 (Willis, 6 [Tr] 989-993).

DTE Electric's replies to exceptions, p. 90 (footnote omitted).

The company asks that the Commission adopt the ALJ's recommendation to reject Bloom Energy's proposed changes to Rider 3 but disagrees with the ALJ's recommendation for the company to, in its next rate case, propose a method to reduce the reservation fee for fuel cell systems arguing that rate cases are already unwieldy without including this recommendation without justification. *Id*., pp. 91-92.

The Commission finds the ALJ's recommendation to be well-reasoned and supported by the record in this case. The Commission finds that Bloom Energy failed to rebut the customer privacy and potential subsidization concerns raised by DTE Electric and, similarly, did not rebut the Staff's position that prorating standby generation capacity based on FOR may be reasonable but prorating distribution capacity based on FOR is not. The Commission is persuaded by the testimony presented by the company and the Staff that Bloom Energy's recommendations for the Rider 3 tariff are not reasonable at this time. *See*, 6 Tr 980-992; 8 Tr 5156-5157, 5509-5510, 5510-L. The Commission further finds that, given the record presented, the ALJ arrived at a reasonable and balanced recommendation that addresses the concerns raised by the company and the Staff but also takes steps towards reducing the barriers to using fuel cell technology raised by Bloom Energy. Thus, the Commission adopts the ALJ's recommendation and directs DTE Electric to file in its next rate case, a proposal to reduce the reservation fee for fuel cell systems, based on FOR for these systems, or provide justification as to why it is unreasonable to do so.

4. Rider 10 Administrative Charge

DTE Electric proposed to reduce the Rider 10 administrative charge, explaining that the Rider 10 pricing structure is unique because Rider 10 customers have an interruptible service designated as a capacity resource within the MISO Resource Adequacy Construct and have a significant portion their power supply rate based on the real time MISO LMP energy price. The company explained that Rider 10 customers' cost responsibility for power supply should be different from other customer classes and therefore, DTE Electric proposed a 50% credit to the Rider 10 class contribution to Allocation Schedule 100 (Power Plant Energy Production). 7 Tr 2357. To prevent subsidization by other customers, DTE Electric also proposed to revise the non-interruption penalty from the current $50 per kW applied to the highest hour interruptible demand created during the interruption period to the higher of the current penalty or the actual damages incurred by the company, inclusive of MISO penalties. 7 Tr 1696-1697.

Gerdau asserted that the administrative charge should be eliminated rather than reduced because Rider 10 customers are fully interruptible, are supplied with wholesale market energy, are not subject to the PSCR factor, and therefore, are not served by and do not receive benefits from DTE Electric's generation. Gerdau contended that DTE Electric's administrative charge resulted from the company's COSS in which the company allocated a portion of its production non-capacity costs to the Rider 10 class as opposed to resulting from any actual recovery of the administrative costs of managing and billing service. 8 Tr 3726-3727.

ABATE offered support for DTE Electric's reduction to the Rider 10 administrative charge. 8 Tr 2917. However, ABATE refuted DTE Electric's claims in previous proceedings that Rider 10 customers indirectly benefit from DTE Electric's generation by way of lower and less volatile MISO LMPs. ABATE called such claims intangible and unquantified and, that to the extent there is such benefit, retail open access customers also receive those benefits but do not pay any of the associated costs. 8 Tr 2922-2924.

The Staff agreed with DTE Electric's proposed reduction to the Rider 10 administrative charge but disagreed with the company's proposal to use excess penalty revenue to enhance the company's DR programs. Rather, the Staff recommended that DTE Electric continue to credit excess penalty revenues to PSCR customers. 8 Tr 5530-5531.

The ALJ agreed with Gerdau and ABATE that the Rider 10 administrative charge is a result of the stacking method that was eliminated in 2015, and that, because Rider 10 customers are fully interruptible and rely solely on the MISO market for energy, the administrative charge is not cost-based. Therefore, the ALJ agreed with DTE Electric's proposed reduction to the administrative charge and recommended that the Commission direct the company to eliminate the administrative charge in its next general rate case. As to the company's changes to the non-interruption penalty, the ALJ noted that no party objected to the company's proposed modification and agreed that DTE Electric's proposal addresses the potential for subsidization of non-compliant Rider 10 customers by other customers. The ALJ also agreed with the Staff that DTE Electric's plan for allocating excess penalty funds to DR programs should be rejected because such a reallocation would circumvent the processes already in place to evaluate DR programs and spending. PFD, p. 692.

DTE Electric excepts to the ALJ's recommendation that the company should eliminate the Rider 10 administrative charge in the next rate case. According to the company:

> [i]f the entire Rider 10 administrative charge is eliminated, it would not only remove production plant and non-fuel production O&M costs in allocation schedules 100 and 200A as recommended by Staff, but also eliminate the allocation of other future production costs such as working capital or uncollectible expense, which would then be allocated to other customer classes.

DTE Electric's exceptions, p. 222.

In its replies to exceptions, Gerdau reiterated the reasoning behind the ALJ's recommendation for DTE Electric to reduce the Rider 10 administrative charge in this case and, in its next rate case, to file a proposal to eliminate the charge. Gerdau states that DTE Electric's concerns seem to be that the ALJ's recommendation goes beyond the Staff's recommendation, which the company describes as a scenario in which Rider 10 customers are not allocated any production plant and non-fuel production O&M costs by allocation schedules 100 and 200A in the next rate case. Gerdau's replies to exceptions, p. 2 (citing DTE Electric's exceptions, p. 222). Gerdau finds this claim to be without merit and repeats the support provided on the record for reduction and elimination of the charge. Further, Gerdau explains that the Staff's "explicit reference to allocation schedules 100 and 200A does not mean that any other production costs allocated to [Rider]10 using any other allocation schedules should not likewise be eliminated." Gerdau's replies to exceptions, p. 3 (footnotes omitted). Noting that the Staff did not file an exception to the PFD on this issue, Gerdau requests that the Commission adopt the ALJ's recommendation in full. *Id.*, pp. 3-4.

ABATE points out that DTE Electric, in its exceptions, argued that the ALJ's recommendation would eliminate the allocation of other future production costs such as working capital or uncollectible expense. According to ABATE, it is improper for the company to raise this for the first time in exceptions. ABATE then repeats the arguments by intervenors that the Rider 10 administrative charge is not cost-based and should be eliminated. ABATE's replies to exceptions, pp. 14-15.

No party filed exceptions regarding the ALJ's recommendation to reduce the Rider 10 administrative charge in this case. Finding the ALJ's recommendation well-reasoned and supported by the record and noting the lack of exceptions, the Commission adopts the reduction in the charge. As to the ALJ's recommendation for the company to file a proposal in its next rate case to eliminate the charge, the Commission finds compelling the arguments made by Gerdau and the Staff that the administrative charge is no longer cost-based and should be eliminated. *See*, 8 Tr 2906-2923, 3727-3732. As such, in its next general rate case, DTE Electric shall either file a proposal to eliminate the charge, or, in the alternative, propose an administrative charge that is based on DTE Electric's cost to serve these Rider 10 customers, along with evidentiary support for this revised charge. The Commission accepts DTE Electric's changes to the non-interruption penalty but is persuaded by the Staff's testimony regarding allocation of the penalty funds. *See*, 8 Tr 5531. Therefore, the Commission adopts the ALJ's recommendations regarding the allocation of these funds.

5. Rider 18

DTE Electric proposed two changes to its DG program, referred to as Rider 18: (1) changing the inflow rate by requiring all new DG customers to take service under Rate D1.12 and (2) changing the outflow credit to the average MISO hourly LMP for the appropriate DTE Electric node (calculated separately for each pricing period for customers taking service under TOU rates), plus a credit for avoided line losses. DTE Electric stated that its proposed changes would not take effect until the latter of the company hitting any of the category-specific reservations set out in MCL 460.1173(3) (i.e., 0.5% for Category 1 customers, etc.) or the first quarter of 2024, and that if both the company's changes are approved, DTE Electric would raise the cap on the DG program to 3% of the company's average in-state peak load for full service customers during the previous five calendar years. DTE Electric added that it would also not enforce the category-specific capacity limits set out in MCL 460.1173(3). 6 Tr 1169-1172, 1181-1183.

The inflow rate, outflow credit, and other proposed changes to the DG program are addressed in further detail below, along with the ALJ's recommendations and Commission decision for each.

DTE Electric filed exceptions to the PFD regarding Rider 18 and, in its exceptions, generally describes the company's proposal regarding the DG program and the benefits of its proposal. DTE Electric's exceptions, pp. 222-225.

a. Inflow

In specific terms, DTE Electric proposed that DG customers take service under Rate D1.12 because, according to the company:

> Customers who install a DG system and take service under Rider 18 do not reduce the number of customers served by the Company or their average NCP demand, so these customers are not driving any delivery cost savings. Yet these same customers typically consume a portion of their generation onsite, so they reduce the volume of energy they purchase and the corresponding delivery portion of their bills. In other words, Rider 18 customers are able to reduce the delivery portion of their bills without the Company being able to realize a similar amount of cost savings. Thus, delivery costs are being shifted from Rider 18 customers to non-Rider 18 customers. The Company's proposal to require use of the proposed D1.12 rate would correct this by appropriately charging customers based on the peak demand that they are placing on the system[.]

DTE Electric's initial brief, p. 260.

The CEOs asked that the Commission reject DTE Electric's proposed inflow rate stating that the D1.12 rate is unreasonable on its own, that the Commission has previously rejected DTE Electric's proposal to apply a punitive charge to DG customers, and that the new D1.12 rate proposal should be rejected for the same reasons. CEOs' initial brief, pp. 30-31.

The Staff recommended that DG customers be permitted to take service under rate D1.8, dynamic peak pricing, explaining that while the rate is considered to be a DR rate with pricing set to encourage certain behaviors, the pricing is justified by cost differentials. Therefore, the Staff averred that the pricing is appropriate for DG customers. 8 Tr 5141. DTE Electric opposed the Staff's recommendation regarding the D1.8 rate.

Citing to the initial briefs of GLREA, the DAAOs, the Staff, EIBC/IEI, and MNSC and the arguments therein as well as testimony from the CEOs, the ALJ recommended that DTE Electric's proposal to require all new DG customers to take service under the D1.12 rate be rejected. PFD, pp. 694-695. The ALJ also recommended that the Staff's proposal to allow DG customers to take service under the D1.8 rate be rejected and expressed agreement with DTE Electric that Rate D1.8 is not cost-based and is intended to encourage participating customer to shift usage from on-peak to off-peak periods. The ALJ suggested that the Staff further develop its rationale for the recommendation to be presented in a future rate case. *Id*., p. 696.

Citing the company's prior discussion of the D1.12 rate and incorporating the arguments made in its initial brief, DTE Electric excepts to the ALJ's recommendation to reject the D1.12 rate and its application to DG customers. DTE Electric's exceptions, p. 225.

In reply, the CEOs repeat their opposition to the application of the D1.12 rate to DG customers and dispute the company's assertions of a cost shift and contend that DTE Electric failed to support its D1.12 rate. The CEOs request that the company's inflow proposal be rejected. CEOs' replies to exceptions, pp. 6-7.

DTE Electric, in its replies, states that the DAAOs' agreement with the ALJ's recommended rejection of the D1.12 rate in exceptions is not a proper exception. DTE incorporates its prior arguments and exceptions regarding the inflow rate. DTE Electric's replies to exceptions, p. 93.

Replying to DTE Electric's exceptions, MNSC incorporates its previously stated arguments in support of its position that the Commission should reject the D1.12 rate for DG customers. MNSC's replies to exceptions, p. 76.

The Commission finds the ALJ's recommendation regarding the company's proposed inflow rate for DG customers to be well-reasoned and supported by the record in this case. In addition to finding the D1.12 rate to be problematic to implement for residential customers as discussed *supra*, the Commission similarly agrees that the D1.12 rate is not appropriate to impose on DG customers. The Commission is not convinced by the company's argument that DG customers create a cost shift onto non-DG customers and does not find that the company properly evaluated the benefits of DG systems or how DG systems interact with the grid, as pointed out by intervenors. *See*, 8 Tr 3183-3197, 3565-3566, 3600-3626, 5506-5508. However, the Commission declines to adopt the ALJ's recommended rejection of the Staff's proposal to permit DG customers to take service under the D1.8 dynamic peak pricing rate. As acknowledged by DTE Electric, the Staff, and the intervening parties, DG customers are not a separate class apart from residential customers who have access to the D1.8 rate. Therefore, the Commission is not persuaded by DTE Electric's arguments that DG customers should be barred from the rate. As the Staff explained, the pricing of the rate is justified by the cost differentials and the pricing of the rate is set to encourage energy usage reductions during certain system conditions. *See*, 8 Tr 5141; *see also*, DTE Electric's initial brief, p. 268. The Commission does not see justification on this record to prohibit DG customers from taking service under the D1.8 rate should they choose.

b. Outflow

DTE Electric proposed to revise its DG program outflow rate from the current power supply less transmission amount to a rate based on MISO's monthly average LMP. Explaining the need to base the credit on quantifiable costs and ensure consistency between DG customers, the company asserted that its proposed rate reflects the costs borne by DTE Electric from Rider 18 outflow, corrects the overpayment to DG customers for the capacity portion of power supply, and aligns the Rider 18 outflow credit with the "Energy Only Sales" provision in Rider 5. DTE Electric's initial brief, p. 260; *see also*, 6 Tr 1170-1177.

The Staff opposed DTE Electric setting the outflow rate at MISO's LMP and averred that doing so ignores the reality of the company's power supply costs that are offset by DG customers' outflow and undercompensates outflow. The Staff explained that DG outflow is supplied at the distribution level and therefore, it offsets transmission and, as such, the outflow rate should be set at power supply plus transmission. The Staff added that including transmission still does not likely fully compensate for the contribution outflow has toward reducing transmission usage. 8 Tr 5139-5141, 5510.

GLREA recommended that the outflow credit be applied to the distribution portion of the DG customer's bill in addition to the power supply portion because outflow energy flows to the customer's neighbors, thereby reducing the utility's distribution costs. 8 Tr 3181. GLREA further recommended that the Commission direct the Staff to conduct a study to determine the portion of delivery costs to include in the study and to require DTE Electric to purchase the renewable energy credits (RECs) produced by a customer's DG system under Rider 14, Rider 18, and any successor program and transfer the RECs the company's voluntary green pricing (VGP) program. 8 Tr 3182, 3214-3215; GLREA's initial brief, pp. 30-33. The Staff supported GLREA's recommendation for DTE Electric to purchase RECs from DG customers, stating that it would enhance the value of the DG program and reduce costs for the VGP program. The Staff suggested that, if the Commission approves GLREA's proposal, then DTE Electric should work with intervenors to revise the Rider 18 tariff to include language providing for the purchase of RECs. 8 Tr 5389-5391.

The CEOs advised that a COS approach should be used to determine the outflow credit. After explaining this method of analysis of the load factors of DG customers and the DG system's benefits related to capacity, energy, and transmission, the CEOs arrived at an outflow credit of $0.12311 per kWh. 8 Tr 3638-3644.

The ALJ determined that the Staff's proposed outflow credit, power supply plus transmission, should be adopted as well as GLREA's recommendation for DTE Electric to purchase RECs from DG customers and apply them to the company's VGP program. The ALJ found that DTE Electric's proposed outflow credit dilutes the value of the DG program and, because the LMP price would not be known before outflow occurs, DG customers would not receive actionable price signals. The ALJ then expressed disagreement with DTE Electric's contention that DG customers should not be compensated for capacity because there is no obligation that they provide capacity. The ALJ stated that the company did not recognize DG capacity in its load forecast even though DG systems' capacity contributions provide a cost savings to DTE Electric. PFD, pp. 701-702.

Turning to DTE Electric's argument that an outflow credit inclusive of transmission runs afoul of MCL 460.1177(4) (Section 177(4)) [60] and the Commission's decision in the May 2 order to exclude transmission from the outflow credit, the ALJ expressed disagreement with the company's interpretations. First, the ALJ stated that DTE Electric did not rebut evidence in the instant case that the Commission excluded transmission from the outflow credit based on the evidence in Case No. U-20162, and that in Case No. U-20162, the Commission explained the inapplicability of

[60] Section 177(4) reads, in relevant part: "Notwithstanding any law or regulation, distributed generation customers shall not receive credits for electric utility transmission or distribution charges."

Section 177(4) to the inflow/outflow methodology and the discretion provided by MCL 460.6a(14) for the Commission to establish a DG tariff reflective of an equitable COS. *Id*., p. 702 (citing May 2 order, p. 180). Second, the ALJ disagreed with the company that the differences in outflow credit amounts demonstrate a deficiency. Rather, the ALJ agreed with the Staff that the differences demonstrate the options DG customers have for inflow rates. PFD, p. 702.

Next, the ALJ addressed DTE Electric's claims that proposals regarding REC purchases would be better addressed in n MCL 460.1061 (Section 61) VGP proceeding. The ALJ disagreed and found adjustments to Rider 17 (the VGP tariff) for the purchases of RECs is appropriate in this rate case proceeding because it has no impact on how the company purchases renewable energy for the VGP program. Thus, the ALJ recommended that the Commission adopt the Staff's recommendation for DTE Electric to work with stakeholders to revise Rider 18 to include the purchase of RECs and that the Commission direct DTE Electric to submit an application for *ex parte* approval of the tariff within 90 days from the date of the Commission's order in this docket. *Id*., p. 703.

Agreeing with the Staff, the ALJ declined to adopt GLREA's and the CEOs' recommendations to use a COS approach for determining the outflow credit reasoning that it relies on treating DG customers as a separate class, which the Commission has found to be inappropriate. *Id*. The ALJ also declined to adopt GLREA's recommendation to compensate DG customers for purportedly reduced distribution costs, explaining that the energy purchased at the meter from DG customers must still be delivered using the company's distribution system and DG customers are already compensated for reduced distribution costs by way of reduced inflow. *Id*., p. 704. Lastly, DTE Electric proposed that, for primary customers taking service on a demand rate, the outflow credit should be based on the average on-peak outflow demand, and, for secondary customers, the outflow should be based on the average monthly billing demand. The ALJ rejected the company's proposal for secondary customers, agreeing with the Staff that utility costs are driven by on-peak usage and that the DG outflow credit should reflect the fact that DG systems typically generate on-peak. *Id*. (citing 6 Tr 937).

DTE Electric takes exception to the PFD, disagreeing with the arguments presented by the Staff and intervenors, the ALJ's recommendations, and the ALJ's finding that DG customers are not obligated to provide capacity and should therefore be compensated for any provided capacity. DTE Electric's exceptions, pp. 225-226. First addressing the Staff's and intervenors' assertions that DG customer outflow has capacity value, the company disagrees and states that the current outflow compensation includes the retail component of power supply capacity based on the inflow rate schedule, which is a clear overcompensation. The company then repeats its testimony provided at 6 Tr 1219-1220 in support. Thus, DTE Electric argues the proper outflow compensation is equal to the near-term savings that the company realizes from outflow, which is an LMP-based credit adjusted for line losses. DTE Electric's exceptions, p. 227. Next, addressing the inclusion of a transmission component of power supply in the outflow credit, DTE Electric points to the Commission's previous approval in the May 2 order of an outflow credit based on power supply less transmission, argues that there is little to no transmission savings associated with DG outflow, and contends that including transmission is contrary to Section 177(4). DTE Electric's exceptions, pp. 227-228. DTE Electric also disagrees with the ALJ's adoption of the proposal to require the company to purchase RECs from DG customers and asserts that the company reached a settlement agreement in Case No. U-20713, which included amendments to the eligibility and structure of Rider 17, meaning any discussion of a legacy Rider 17 in the instant case is inappropriate. The company maintains that any Rider 17 changes should be reserved for its Section 61 filing. *Id*., p. 229.

GLREA excepts to the ALJ's rejection of its recommendation to compensate DG customers in the outflow rate for reductions in DTE Electric's distribution system costs and responds to the three assertions made in the PFD. First, GLREA agrees that outflow is purchased from the meter as source of supply but contends that because the outflow rate is statutorily required to be based on the COS, the impact of the outflow on the company's costs is the critical consideration in determining the rate, "irrespective of the transfer of ownership of the energy." GLREA's exceptions, p. 2 (citing 8 Tr 3165 and MCL 460.11(1)). Second, GLREA also agrees that outflow energy must still be delivered to customers using the distribution system but argues that the record shows that most of outflow energy uses only the service drop lines, the cost of which is recovered by a fixed customer charge rather than a delivery charge. GLREA's exceptions, pp. 2-3 (citing 8 Tr 3166-3172, 3186). Third, GLREA argues that the ALJ's statement that "DG customers are already compensated for reduced distribution costs through reduced inflow" conflates two separate issues. GLREA's exceptions, p. 3 (quoting PFD, p. 704). GLREA explains that a DG customer's use of DG energy onsite reduces the customer's bill by an amount that includes distribution costs, but inflow is separate from outflow, for which DG customers are not compensated for reduced delivery costs. GLREA's exceptions, p. 3. As such, GLREA asks that the Commission recognize that some portion of outflow reduces delivery costs, determine an appropriate amount in the next rate case, and require credible steps to be taken towards determining an amount in the interim by way of stakeholder meetings, a Staff analysis report, and the presentation of evidence by DTE Electric. *Id*.

GLREA also addresses the ALJ's support for requiring DTE Electric to purchase RECs from Rider 18 stating that, after the filing of briefs in this case, DTE Electric announced that the VGP Rider 17 net premium reached approximately zero due to current (at the time) market conditions. *Id*., p. 4 (citing WXYZ, DTE Electric's MIGreenPower Drives Renewable Energy Growth, September 26, 2022, http://www.wxyz.com/marketplace/smart-home-solutions/dtes-migreenpower-drives-renewable-energy-growth) (accessed November 18, 2022)). Per GLREA, as a result of the VGP net premium reaching zero, the proposal to pay DG customers for RECs would result in a credit of zero to DG customers for the near future. However, GLREA contends that the costs and credits for the VGP program are revised annually and therefore, GLREA asks the Commission to adopt the PFD on this issue because the value of RECs varies over time. GLREA's exceptions, p. 4.

The Staff takes exception to the PFD to the extent that it asks the Commission to clarify that the selling of RECs should be optional for DG customers. Staff's exceptions, p. 9.

EIBC/IEI begins their exceptions describing the ALJ's rejection of GLREA's recommendation to compensate DG customers for reduced distribution costs. EIBC/IEI state that they take no present position on GLREA's recommendation but encourage the Commission not to categorically exclude distribution costs from the DG outflow credit, as the ALJ appears to do, and consider distribution costs under the framework that underlies the Staff's recommendation to include transmission costs. Referencing the Staff's initial brief, EIBC/IEI explain that DG uses only some portion of the distribution system and its limited use should be reflected in the outflow credit the way transmission costs are. EIBC/IEI's exceptions, pp. 8-10 (citing Staff's initial brief, p. 189).

The CEOs take exception to the ALJ's conclusion that the CEOs attempted to treat DG customers as a separate class. Rather, the CEOs explain that their testimony aimed to quantify the value that DG outflow provides to the grid by showing that DG customers are less costly to serve, not to separate DG customers into their own class. The CEOs claim that their testimony was the only attempt to quantify the value of DG outflow and that, by striking this analysis, the discussion of DG outflow value is merely qualitative. The CEOs ask that the Commission consider their analysis in the final decision and, at a minimum, acknowledge the value and necessity of analyzing DG customers as a discrete dataset to determine the value of DG outflow to the grid. CEOs' exceptions, pp. 1-2.[61]

The DAAOs except to the PFD in that they argue that the ALJ did not go far enough in her recommendation to address the link between the expansion of DG solar and the long-term affordability of rates. The DAAOs enumerate the importance of DG for low-income customers and customers of color and argue that the DG outflow rate "continues to undervalue solar, disincentivize[s] low-income participation in the DG program, and frustrate[s] advancement towards the most affordable long-term resource mix available." DAAOs' exceptions, p. 10.

MI-MAUI/Ann Arbor except to the ALJ's failure to directly address the IT expense of $0.4 million associated with the DG Rider 18 pricing update. MI-MAUI/Ann Arbor posit that the ALJ assumed the IT expense was encompassed in her overall denial of DTE Electric's proposed DG rate but ask that the Commission explicitly deny the $0.4 million expense because it is "an unreasonable amount to spend (in addition to the $0.8[million] that was approved for this IT

[61] The exceptions filed by the CEOs are not paginated. Therefore, the Commission references page numbers in natural order beginning with the first page following the title page.

project in Case No. U-20162) to track $200[,000] in annual spending." MI-MAUI/Ann Arbor's exceptions, p. 21.

EIBC/IEI reply to DTE Electric's exceptions regarding Section 177(4) and state that the Commission has addressed Section 177(4) applicability on multiple occasions, DTE Electric's reading is erroneous and repeats prior arguments, and ask that the Commission adopt the ALJ's recommendation for DG outflow. EIBC/IEI's replies to exceptions, pp. 7-8.

GLREA states in its replies that DTE Electric merely repeats in its exceptions inaccurate assertions that the company made in testimony. GLREA repeats its arguments regarding DG residential customer impacts on NCP costs and incorporates its previous arguments supporting the inclusion of the transmission component of power supply costs into the outflow credit. In response to DTE Electric's contention that outflow should equate to the company's near-term savings, GLREA argues that the company provides no reason why long-term savings should be excluded from the outflow credit. GLREA's replies to exceptions, pp. 2-3. As to the company's purchase of RECs, GLREA dismisses the company's reference to the settlement agreement in Case No. U-20713, stating that the Staff and the ALJ were aware of the settlement agreement in reaching their conclusions. GLREA argues that the VGP proceeding is only tangentially affected by the proposal to purchase RECs, and, therefore, the urgent need for RECs in the VGP program is better addressed in the instant case. *Id.*, pp. 3-4.

The Staff replies to the CEOs' argument that the CEOs' analysis should not be considered as treating DG customers as a separate class arguing that the Staff addressed these arguments in its briefing. The Staff supports the ALJ's rejection of the CEOs' separate class calculation. As to the CEOs' arguments that all DG grid benefits should be reflected in the DG tariff, the Staff repeats that an identified benefit should not automatically result in paid compensation. The Staff also points to its previous arguments to reject the company's proposed LMP-based rate to compensate outflow. In response to GLREA's exceptions claiming that distribution cost savings should be included in outflow compensation, the Staff insists that the ALJ weighed the evidence and properly rejected GLREA's position. The Staff also notes that DTE Electric objected to the ALJ's rejection of its changes to the DG program and repeated its arguments made in this and other proceedings. The Staff refers to the ALJ's reasoning and the record in this case in asking that the Commission reject the company's arguments made in exceptions. Staff's replies to exceptions, pp. 23-24, 26, 28.

The CEOs, in replies to exceptions, dispute DTE Electric's assertion in exceptions that no party presented evidence to show that transmission savings exist and repeat their arguments supporting the inclusion of the transmission component in the outflow credit. The CEOs also restate that DTE Electric's outflow proposal undercompensates DG customers and that ask that the Commission adopt the PFD. CEOs' replies to exceptions, pp. 7-8.

Replying to the CEOs' argument that they did not propose to make DG customers a separate class, DTE Electric argues that the CEOs simply restated their position without recognizing the fundamental problems identified by the ALJ and that their analysis was flawed in that it effectively treated DG customers as a separate class. DTE Electric's replies to exceptions, p. 94. Turning to GLREA's assertion that the ALJ conflated outflow compensation with compensation via reduced distribution costs through the inflow rate, the company cites MCL 460.1174(4) to contend that GLREA's position is "fundamentally wrong[.]" DTE Electric's replies to exceptions, p. 95. The company also repeats its previously stated arguments in opposition to the concept of a distribution credit in the outflow rate and the recommendations for the company to file a new tariff to allow for the company's purchase of RECs from DG customers. *Id*., pp. 96-97.

MNSC, in its replies to exceptions, argues that none of DTE Electric's arguments made in exceptions warrant rejection of the ALJ's recommendations. First, MNSC contends that, contrary to DTE Electric's claims that DG customers should not be compensated for capacity, the company recognizes DG capacity in its forecast. Second, MNSC argues that the ability of DG customers to select a peak pricing rate demonstrates a benefit and proper cost causation of the Rider 18 rate design as opposed to a deficiency like the company claims. Third, MNSC points out that the Commission's decision in Case No. U-20162 to exclude transmission was specific to that case and left the Commission discretion to adopt a DG tariff that equitably reflects the COS to DG customers. Fourth, MNSC relies on its testimony and the Staff's testimony supporting the transmission savings justifying its inclusion in the outflow credit. Lastly, MNSC avers that the Commission has decided the applicability of Section 177(4) as correctly explained by the ALJ. Thus, MNSC asks the Commission to adopt the PFD on this issue.

The Commission finds the ALJ's recommendation regarding the compensation rate for DG customer outflow to be well-reasoned and supported by the record in this case. The Commission is persuaded that the Staff's proposed credit of power supply plus transmission represents the most appropriate compensation rate for outflow and finds that the record in this case sufficiently demonstrated that the company's proposal undervalues DG customer outflow. *See*, 8 Tr 4464-4467, 5139-5141, 5145-5150, 5384-5386, 5510-B through 5510-E; *see also*, Exhibit S-6, Schedule F-7. Further, in response to DTE Electric's exceptions regarding Section 177(4), the Commission points to the extensive discussion of the legal framework of the DG program and applicability of Section 177 to DG outflow specifically on pages 167-181 of the May 2 order. The Commission will not rehash that discussion here but reincorporates its conclusions regarding Section 177(4) applicability in this order.

As to MI-MAUI/Ann Arbor's exceptions regarding the $0.4 million associated with the IT expenses for DTE Electric's proposed DG rates, the Commission agrees that given the ALJ's recommendation to reject DTE Electric's proposed DG outflow rate and the Commission's adoption thereof, the $0.4 million in IT expenses should also be disallowed. However, in its review of the PFD, the Commission finds that, while the ALJ did not discuss the $0.4 million associated with the DG outflow rate expenses specifically, the disallowance was included in her overall recommendation regarding IT-Level 1 estimates. *See*, PFD, p. 344; *see also*, Exhibit S-12.3. The ALJ's recommended 100% disallowance reflected on line 72 of the ALJ's Appendix E to the PFD is inclusive of the $0.4 million MI-MAUI/Ann Arbor raise in their exceptions. Therefore, the Commission refers to its decision regarding IT capital expenditures described above in the Rate Base section of this order, where the 100% disallowance of Level 1 cost estimates is adopted.

As to DTE Electric's purchase of RECs from DG customers, the Commission agrees with the ALJ, the Staff, and intervenors that it is beneficial to both DG customers and the VGP program. However, the Commission agrees with DTE Electric that such a proposal involving changes to Rider 17 is more appropriately addressed in the company's ongoing VGP proceeding in Case No. U-21172. Therefore, the Commission directs DTE Electric, within 90 days from the date of this order, to supplement its VGP application in Case No. U-21172 with a proposal for amendments to Riders 17 and 18 to accommodate the company's purchase of RECs from DG customers to be applied to the company's VGP program. Finding the Staff's exceptions on this issue well-taken, the Commission adds that any purchase of RECs should be at the option of the DG customer, which DTE Electric should reflect in its proposal. The Commission notes that DTE Electric filed its application for a biennial review of its VGP program on August 31, 2022, in Case

No. U-21172, and a prehearing conference was held on October 25, 2022, before Administrative Law Judge Katherine E. Talbot, wherein a schedule for that case was established. The Commission acknowledges that some delay and adjustment to the schedule set in that case will be necessary to incorporate the RECs purchase issue into the VGP proceeding. However, the Commission finds this pathway to be more appropriate considering the strict 10-month timeline allowed in a general rate case versus the lack of a statutory deadline in a VGP proceeding.

c. Other Proposals

EIBC/IEI, MNSC, the CEOs, and GLREA recommended that the Commission establish a successor tariff to Rider 18 to go into effect once the cap on the DG program is reached. EIBC/IEI's initial brief, pp. 59-61; the CEOs' initial brief, pp. 53-54; MNSC's initial brief, p. 135; GLREA's initial brief, pp. 24-30, 33. DTE Electric objected, arguing that Riders 5 and 14 already allow DG customers to interconnect to the utility's distribution system once the cap is reached. DTE Electric's initial brief, pp. 266-268.

The ALJ found the development of a just and reasonable post-cap DG tariff to be reasonable pointing to several parties' arguments that DG systems are qualifying facilities (QFs) under the PURPA, and, as such, DTE Electric is obligated to purchase that energy at the utility's avoided cost. However, given the time constraints and volume of issues addressed in the instant rate case, the ALJ recommended that a successor tariff to Rider 18 be addressed in a separate proceeding. Therefore, the ALJ recommended that the Commission direct DTE Electric to file, within 90 days of the date of this order, a proposed tariff for a post-cap DG program, including Riders 5 and 14 if the company believes these programs can be reasonable successors. The ALJ invited other interested parties and stakeholders to intervene and advocate their positions on the matter. PFD, p. 705.

GLREA takes exception to the PFD expressing concern about the delayed implementation suggested by the ALJ. GLREA asserts that the residential DG program will reach its cap in 2023, and that if a post-cap tariff is not in effect by that time, there will be delay and confusion for new DG customers and Michigan's solar industry. Therefore, GLREA requests that the Commission direct DTE Electric to provide updated information on DG participation and a more detailed estimate of when the residential DG cap will be reached. Additionally, GLREA asks that the Commission address the post-cap tariff in its forthcoming order in this case, establish an expedited schedule to develop a post-cap tariff, or provide an interim post-cap tariff (set at the current DG rate) until a new tariff is effective. GLREA's exceptions, pp. 4-5.

Citing *Union Carbide v Pub Serv Comm*, 431 Mich 135, 146; 428 NW2d 322 (1988) and *Attorney General v Pub Serv Comm*, 269 Mich App 473; 713 NW2d 290 (2005) for the contention that the Commission may not exceed its regulatory authority, DTE Electric disagrees with the ALJ's recommendation to develop a post-cap DG tariff. DTE Electric again asserts that Rider 5 and Rider 14 are available, states that the Commission recently approved a settlement agreement in Case No. U-18091 that addresses the timing of the company's next MCL 460.6v/PURPA proceeding, and highlights that MCL 460.1173 clearly establishes the 1% cap. DTE Electric's exceptions, pp. 230-231. DTE Electric argues that the ALJ's recommendation ignores the Commission's limited authority and includes an overly simplistic reference to PURPA. With respect to the ALJ's recommendation that DTE Electric address the conflict between MCL 460.6 and its contention that creating a successor tariff would violate the company's management prerogative, DTE Electric finds the recommendation unwarranted and based on the incorrect authority that MCL 460.6 grants authority to the Commission, which it states is contrary to controlling authority. DTE Electric's exceptions, pp. 232-233.

Further, DTE Electric asserts that the ALJ's recommendation would effectively mean subsidization of DG customers and private businesses, such as third-party solar suppliers and installers, by non-DG customers, which amounts to the taking of private property for public use contrary to Article 10, Section 2 of the Michigan Constitution and the 5th Amendment of the U.S. Constitution. DTE Electric's exceptions, pp. 233-234. In raising the constitutional issues, DTE Electric adds that as a quasi-judicial body, the Commission does not have the power to hold statutes unconstitutional and cannot determine constitutional questions. *Id*., p. 234. Lastly, pointing to the plain statutory language in MCL 460.11 authorizing the Commission to set cost-based rates, DTE Electric argues that:

> [r]egardless of how one may feel about the conceptual benefits of DG, third-party economics are the responsibility of third parties, not the Commission or the Company. The Company is simply trying to apply cost-causation principles so that non-DG customers do not subsidize DG customers.

DTE Electric's exceptions, p. 234.

In their exceptions, EIBC/IEI agree with the ALJ's recommendation but asks that the Commission direct DTE Electric to work with stakeholders to develop the successor tariff similarly to how the ALJ directed the company to work with stakeholders for the home battery pilot. EIBC/IEI further recommend that the Commission use the settlement agreement recently approved in Consumers' IRP proceeding as a template for the stakeholder process, except the Commission should require DTE Electric to begin the stakeholder process within 60 days from the date of a final order in this case. As to the substance of the successor tariff, EIBC/IEI ask that the Commission require DTE Electric to maintain the practical benefits of the current DG program (i.e., the straightforward interconnection process, on-bill treatment of expenses and credits) in the successor tariff and that systems 150 kW of alternating current and smaller receive full avoided costs. Lastly, EIBC/IEI recommend an expedited contested case following the conclusion of the stakeholder process. EIBC/IEI's exceptions, pp. 10-11.

The CEOs take exception to the PFD in a limited manner in that the CEOs agree with the ALJ's recommendation but contend that the 90-day deadline to file a new tariff is too restrictive and ask that the Commission hold an extensive stakeholder process in a contested proceeding to allow for thorough consideration in developing a successor tariff. The CEOs ask that the company be required to hold multiple stakeholder meetings and to include in its proposal a PURPA-compliant tariff designated for small customers (systems under 150 kW) and full avoided cost compensation. CEOs' exceptions, pp. 2-3.

In their exceptions, the DAAOs ask that the Commission conduct the successor tariff development as a contested proceeding to ensure equity and opportunity for all parties to provide input. DAAOs' exceptions, p. 11.

EIBC/IEI, in their replies to exceptions, contend that DTE Electric's exceptions offer no argument as to why the Commission's authority pursuant to MCL 460.6v is insufficient to direct the company to develop a successor tariff and why federal PURPA regulations which set out the must-purchase obligation for utilities and avoided cost obligations should be ignored. EIBC/IEI urge the Commission not to allow DTE Electric to "paint it into a corner" with DG and instead to adopt the PFD on this issue and require the company to conduct a stakeholder proceeding within 60 days of the date of a final order in this case. EIBC/IEI's replies to exceptions, pp. 9-10.

GLREA asserts that DTE Electric's exceptions ignore GLREA's testimony on why Riders 5 and 14 are insufficient and that the company's claim that no action is needed because of the settlement agreement in Case No. U-18091, is meritless. GLREA reasons that the settlement agreement in Case No. U-18091 did not address a standard tariff for customer producers connected to the distribution system at secondary voltage, close to load. Further, GLREA argues that the Commission has no authority to overrule PURPA and that EIBC/IEI witnesses addressed the company's argument regarding "creative labeling" of an extended DG program. GLREA's replies to exceptions, p. 5 (quoting DTE Electric's exceptions, p. 231). GLREA goes on to rebut DTE Electric's takings claims, calling them absurd and pointing to *Duquesne Light Co v Barash*, 488 US 299;109 S Ct 609; 101 L Ed 2d 646 (1989) (citing *Federal Power Co v Hope Natural Gas*, 320 US 591; 64 S Ct 281; 88 L Ed 333 (1944)) to argue that adopting the ALJ's recommendation for outflow would compromise an infinitesimal amount compared to the company's overall costs and revenues. GLREA's replies to exceptions, pp. 5-7. Lastly, GLREA states that because of DTE Electric's insistence in proposing Riders 5 and 14 as successor tariffs for DG, the Commission should consider the riders to be DTE Electric's proposal and open an expedited proceeding to weigh the issues with the riders along with alternative proposals from intervenors, and to design a tariff in that proceeding. *Id*., p. 7.

The Staff replies to the CEOs' exceptions regarding a successor tariff being set at full avoided costs, asserting that the CEOs fail to point to a definition of "full" on the record. Defining the term, according to the Staff, is properly addressed in a contested proceeding that develops the successor tariff. Staff's replies to exceptions, p. 24. Replying to DTE Electric's argument that a successor tariff would create subsidization by other customers, the Staff states that the claim is unsupported or relies on arguments already addressed and decided by the parties and the ALJ. *Id*., p. 29.

In replies to exceptions, the CEOs state that a successor tariff is in the best interest of ratepayers, the company, and the parties to this case because it would reduce litigation costs in future rate cases. The CEOs also point to Consumers as an example of a utility that has adopted a similar process in the settlement agreement in Case No. U-21090. CEOs' replies to exceptions, p. 9.

In its replies to exceptions, DTE Electric maintains the arguments made in its exceptions to the ALJ's recommendations for a successor tariff. DTE Electric also disagrees with the recommendations made by GLREA, the CEOs, EIBC/IEI, and the DAAOs in their respective exceptions repeating its previously stated arguments regarding the application of MCL 460.1173, the Commission's legal authority as granted by the Legislature, and the state and federal constitutional implications. DTE Electric's replies to exceptions, pp. 99-102.

The DAAOs support the CEOs recommendation for extensive stakeholder engagement to develop a successor tariff and ask that the Commission direct DTE Electric to file a proposed successor tariff within 90 days from the date of a final order in this docket. The DAAOs restate that any successor tariff should be developed in a contested case. DAAOs' replies to exceptions, pp. 3-4.

The Commission agrees with the ALJ and intervenors that a successor tariff to the DG program should be developed to address the scenario under which DTE Electric plans to continue its interconnection with DER systems once the DG cap is reached. The Commission draws the distinction that the successor tariff is not an extension of the DG program that was implemented pursuant to Public Act 342 of 2016 and finds that adopting the ALJ's recommendation does not flout the DG cap established in MCL 460.1173(3). While DTE Electric excepts to the ALJ's recommendation asserting that it violates MCL 460.1173(3) and the takings clauses under the Michigan and U.S. Constitutions, DTE Electric does not dispute its obligations under PURPA to interconnect with QFs. *See*, 16 USC 824a *et seq*.; *see also*, *e.g.*, 18 CFR 292.303. The company puts forth its Riders 5 and 14 as reasonable pathways for interconnection once the DG cap is met, and the ALJ's recommendation provides for DTE Electric to justify the reasonableness of the riders' terms to the Commission. Therefore, the Commission finds the ALJ's recommendation to be well-reasoned and supported by the record in this case. Within 90 days from the date of this order, DTE Electric shall file in a new docket the options available to customers with DG systems should DTE Electric decide to cap participation in its current DG program consistent with MCL 460.1173(3). These options may include its Riders 5 and 14, with supporting justification. The filing shall be addressed in a contested proceeding allowing for interested parties to weigh in on the proposed tariff options.

C. Voluntary Green Pricing

With respect to DTE Electric's VGP program, established pursuant to Section 61, the Staff and the DAAOs advocated for DTE Electric to provide community solar VGP options for customers that, for a variety of reasons, are unable to participate in that company's DG program. 8 Tr 5448-5449; DAAOs' initial brief, pp. 103-117. The DAAOs testified to the many grid, environmental, accessibility, and community benefits associated with community solar and how community solar is particularly supportive to low-income customers and ratepayers of color. The DAAOs ask that if DTE Electric does not adopt the comprehensive plan submitted by Soulardarity in Case No. U-20713, then the company should instead adopt the Staff's modified community solar plan presented in the instant case. DAAOs' initial brief, pp. 107-116.

DTE Electric opposed adoption of the Staff's community solar plan citing the insufficient time between the Staff's testimony and rebuttal in which to do a proper assessment of the Staff's proposed community solar pilot. The company further stated that while further discussion of pilots would be beneficial, there is insufficient time before the company's VGP filing in August to complete those discussions. Therefore, the company proposed that those pilot discussions be advanced into the August 2022 VGP filing and potentially developed for filing in DTE Electric's next general rate case. 7 Tr 2384-2387.

The ALJ agreed that the time constraints of a 10-month rate case do not allow for the full development of a community solar pilot but stated that a first step in pilot development is facilitating a tariff. The ALJ thus recommended that the Commission require DTE Electric to amend its Rider 17 VGP tariff to provide for community solar programs to be offered through the company's VGP program such that the deficiencies identified by the Staff and the DAAOs may be remedied by a viable community solar offering. The ALJ further explained as follows:

> [w]hile [the Staff] described certain program parameters, such as the maximum size of the pilot and the potential for distribution credits in addition to other credits, and [the DAAOs] made related alternative recommendations, this [ALJ] does not find the record sufficient to make such detailed determinations without the context of specific projects. Instead, to facilitate the development of community solar programs through the VGP program, this [ALJ] recommends that the Commission require DTE [Electric] to revise the Rider 17 tariff to permit the utility to offer customers who are subscribers of a community solar organization the opportunity to participate in the VGP under terms and conditions agreed to by DTE [Electric] and the subscriber organization, with approval of the [Commission] under MCL 460.1061. The tariff should be drafted to permit a program meeting the description in Exhibit S-17 and as described by [the Staff]. This tariff provision will not require any action by DTE [Electric] to implement the tariff at this point, but will facilitate the development of pilot programs in the VGP proceedings. DTE [Electric] should consult with Staff and stakeholders in the development of the tariff language, as Staff recommends. The Commission should also expect DTE [Electric] to fulfill its commitment to engage in discussions regarding community solar piloting in its now-ongoing VGP case.

PFD, p. 710.

The Staff excepts to the PFD in that the Staff states that additional detail is required to successfully implement the ALJ's recommendation and urges the Commission to impose a timeline for DTE Electric, the Staff, and stakeholders to meet to discuss a community solar pilot to the Rider 17 tariff within 60 days of the final order in this case. The Staff further recommends that after the meeting, DTE Electric should be required to file and provide notice for the proposed

Rider 17 tariff in the company's VGP docket (Case No. U-21172) within 90 days from the date of the final order in this case. Staff's exceptions, pp. 14-15.

While agreeing with the ALJ that a community solar project should not be ordered in the instant case, DTE Electric otherwise excepts to the ALJ's recommendation incorporating its previous arguments regarding Rider 17. DTE Electric specifically disagrees that the recommended tariff is a logical first step as the ALJ stated because tariffs in other instances reflect well-considered programs and rates and are not developed first to "spur a discussion." DTE Electric's exceptions, p. 236. The company asks that the Commission reject the implementation of the proposed program and the Staff's filing of a tariff, but states that a VGP proceeding would be better place to discuss community solar. *Id*.

EIBC/IEI express agreement with the ALJ's recommendations regarding community solar but ask that the Commission include a clear roadmap for the final development and approval of a community solar tariff to avoid the delay that results from an issue being "bounced back and forth" between general rate cases and specialized cases like VGP proceedings. EIBC/IEI's exceptions, pp. 11-12.

The DAAOs except to the ALJ's rejection of the Staff's and the DAAOs' proposals for a community solar pilot project and recommendation that DTE Electric amend its VGP Rider 17 to include community solar for two reasons. First, the DAAOs argue that the VGP proceeding is not appropriate to address community solar because the VGP proceeding involves assets that are utility-owned, not community-owned, and therefore miss the benefits and oversight that comes with community ownership. Second, the DAAOs aver that the need for community solar is urgent and should be addressed in the instant case to help alleviate energy affordability issues for DTE Electric customers. The DAAOs insist that there are enough specific recommendations regarding the size and contours of a community solar program in the evidentiary record in this case to begin a community solar pilot in this docket. DAAOs' exceptions, pp. 13-14.

The Staff, in its replies to exceptions, argues that a stakeholder process presents an opportunity to develop a well-reasoned tariff and expresses strong support for the ALJ's recommendation. The Staff also makes note of DTE Electric's claim that there is no authority for the Commission to direct the company to file an additional community solar proposed tariff. Staff's replies to exceptions, p. 29 (citing DTE Electric's exceptions, p. 236, n. 154). The Staff questions why such an argument was not made more prominently and reasserts its opposition to the company's objections. Staff's replies to exceptions, p. 29.

DTE Electric repeats its position regarding the development of another community solar pilot expressed on the record, in briefing, and in exceptions. DTE Electric's replies to exceptions, pp. 104-105. The company also disagrees with the DAAOs' exceptions regarding the proper venue to develop community solar and the urgency of developing such a pilot. DTE Electric further disagrees with the Staff's exceptions contending that, effectively, the Staff's exceptions are no different from the PFD in that it asks for a tariff to be filed in a short time without consideration for how a new program would fit within the existing mix of presently proposed options. As to EIBC/IEI's recommendation for the community solar development process to move forward quickly, DTE Electric argues that EIBC/IEI fail to offer any specific path forward. Thus, DTE Electric again asks that the Commission reject the PFD on this issue and defer community solar discussions to the VGP proceeding. *Id*., pp. 106-107.

The DAAOs maintain that the VGP proceeding is not the appropriate venue to address a community solar program because VGP proceedings focus on company-owned assets and lack urgency. However, should the Commission opt to defer to the VGP proceeding, the DAAOs ask that the Commission be explicit in its order in this case that any community solar program be focused on community ownership and that the goals of a community solar project are to ensure that all customers, including low-income and communities of color, receive equal access to the benefits of DG. DAAOs' replies to exceptions, pp. 4-5.

The Commission agrees with the ALJ that the time constraints and voluminous issues of a general rate case do not allow for the full development of a community solar pilot program in this case. As such, the Commission adopts the ALJ's recommendation for DTE Electric to engage with the Staff and stakeholders to develop a community solar pilot in the company's ongoing VGP proceeding. In exceptions, the Staff asserts that a specified timeline is needed to ensure these discussions carry forward in a timely manner. DTE Electric, in its exceptions, argues that the filing of a fully-developed tariff with the Commission is not how discussions are started, but rather are the result of thorough consideration and deliberation by stakeholders. The Commission finds the points made by the Staff and DTE Electric well-taken. Therefore, as opposed to a fully-developed tariff, the Commission directs DTE Electric to file, within 90 days from the date of this order, in its VGP docket, Case No. U-21172, a straw proposal of a Rider 17 community solar project. This proposal should be included in the supplemental filing the Commission directed DTE Electric to file in Case No. U-21172, with respect to the purchase of RECs from DG customers, discussed *supra*. The Commission finds a straw proposal to be a more reasonable option than a detailed tariff that will still allow parties to understand the company's proposal(s) for a community solar pilot and serve as a starting point for the parties' discussion and litigation in the VGP proceeding.

XI. FUTURE RATE CASES, FURTHER STUDY

The ALJ found that the parties made several recommendations on actions to be taken before or in conjunction with the company's next general rate case. These additional issues were addressed by the ALJ at pages 711 to 728 of the PFD and are similarly addressed by the Commission below.

A. Equitable Considerations in Distribution Planning

The Staff raised concerns regarding DTE Electric's project-specific focused expenditures which the Staff contends "misses the broader impact of the project level investments especially regarding the development of equitable and resilient electric infrastructure." Staff's initial brief, p. 280 (citing 8 Tr 5239). Similarly, the CEOs contended that DTE Electric should "fully incorporate equity into all decision-making processes in its distribution planning and operations" and "adapt its core benefit-cost analysis and prioritization tool, the Global Prioritization Model [GPM], to weight initiatives that advance grid equity appropriately." 8 Tr 3689-3690. The DAAOs raised several equity concerns spanning across the case, arguing, in part, that high energy burdens are disproportionate, impacting "communities of color, especially black households." DAAOs' initial brief, p. 39. In addition, the DAAOs provided the 2021 Detroit-UP Energy Burden Survey Project Report (Energy Burden Survey) as Exhibit DAO-3, which "analyzes how energy burden manifested in harmful outcomes for utility customers such as outages and outage impacts, stress due to energy costs, health vulnerabilities, and more." 8 Tr 4154. DTE Electric responded to the equity concerns noting that it "provided a broad discussion of Energy Justice" in testimony. DTE Electric's initial brief, p. 63, n. 37 (citing 4 Tr 505-521). DTE Electric also noted that it "intends to develop and then file a distribution-related EJ plan in either the next Distribution Grid Plan or Rate Case." 4 Tr 516.

The ALJ noted the parties' concerns regarding the principles of equity including a "mismatch between the discussion of equity in the company's DGP and its proposals in this case." PFD, p. 711. She further noted that the concerns raised led to parties seeking improvements in future proceedings, performance-based ratemaking proposals, and changes to the proposed rate design.

In exceptions, DTE Electric notes that it provided testimony regarding energy justice at 4 Tr 505-521. *See*, DTE Electric's exceptions, p. 67.

The CEOs also take exception, arguing that their recommendations regarding equity and environmental justice were not adopted in the PFD. Specifically, the CEOs state that the ALJ does not address the fact that the company's GPM omits equity and environmental justice altogether. *See*, CEOs' exceptions, p. 4.

In reply, DTE Electric argues that its DGP does "consider equity and environmental justice issues" and that it "also stands by its GPM, and appropriately manages it[s] business in a balanced fashion." DTE Electric's replies to exceptions, p. 12 (footnote omitted).

The CEOs also reply, reiterating that environmental justice was not incorporated into DTE Electric's GPM. CEOs' replies to exceptions, p. 12.

The Commission first would like to thank the parties for their extensive work on these important issues. Notably, the Energy Burden Survey brings forth a wealth of information which will be important to consider going forward. *See*, Exhibit DAO-3. The Commission also agrees that the company's GPM does not adequately incorporate equity and environmental justice considerations. As noted above, however, DTE Electric has indicated its intention to develop and file a distribution-related environmental justice plan based upon the MiEJScreen tool and a geographic view of its reliability data in either its next DGP or general rate case, which will "address the most impacted communities who also experience lower reliability." 4 Tr 513; *see* *also*, 4 Tr 516, Exhibit A-12, Schedule M1, Section 2.2, pp. 26-29. Similarly, the company noted that it "will complete analysis of the reliability of communities identified by the MiEJScreen tool" and "plans to collaborate with the [Commission] Staff to develop protocols for reporting information on reliability, outages, and storm response on a more granular level in response to the [Commission's] March 2, 2022 order in Case No. U-21122." 4 Tr 513. As it did in the September 8 order, the Commission "acknowledges and commends DTE Electric for the inclusion of environmental justice and equity in its distribution plan." September 8 order, p. 73. More work is necessary, however. As the Staff stated, "[t]hough the Company intends for its investments to lead to equitable energy infrastructure, only thorough analyses of the results can determine whether it truly yields equitable results." Staff's initial brief, p. 283; *see also*, September 8 order, p. 73. As such, the Commission will continue to hold DTE Electric to its commitments to more fully incorporate equity considerations into its decision-making processes.

In addition to the above, the parties raised equity concerns regarding DTE Electric's 4.8 kV hardening plans. In its evaluation, the Staff utilized "overlayed maps to better understand the locations and communities served by the fiber network location." Staff's initial brief, p. 281. The overlay "shows that the interior of the existing fiber ring encircling metro Detroit is mostly 4.8 kV," and "[t]he highest density of 4.8 kV substations in the Company's electric system also appears to be in the fiber ring." 8 Tr 5242. Further, the Staff noted that the overlay maps utilizing the MiEJScreen map demonstrated that DTE Electric's "current fiber ring around metro Detroit encircles the largest area with the highest MiEJScreen overall score in its service territory" showing that "[n]early half of the area within the fiber ring has some of Michigan's most environmentally disadvantaged communities." 8 Tr 5243 (footnote omitted). Similarly, the DAAOs argued that the company's 4.8 kV hardening plan wastefully delays the upgrade to

13.2 kV and "leaves the greater portion of the largest majority black city in DTE [Electric]'s service territory with more limited hosting capacity than areas served by the 13.2 kV system." 8 Tr 4318. The DAAOs further proposed that the Commission "require DTE [Electric] to conduct a thorough analysis of alternatives to its 4.8 kV Hardening that considers race-class equity and engages with community members as stakeholders." DAAOs' initial brief, p. 2. DTE Electric responded that much of the 2,200 line miles in the 4.8 kV hardening program "overlap communities which have a high MiEJScreen score" and that the 4.8 kV hardening program will improve "the reliability and safety of the distribution system serving impacted communities in the near-term." 4 Tr 425.

The ALJ noted that the Staff, the DAAOs, MNSC, and the CEOs shared the recommendation "for broader evaluation of alternatives to address the 4.8 kV system and the increasingly compelling need to upgrade that system to support a modern grid." PFD, pp. 711-712. The ALJ recommended that the Commission adopt a form of the parties' recommendations. Specifically, the ALJ recommended that the Commission direct the company to work with stakeholders in researching feasible alternatives for earlier grid conversion at lower costs as well as evaluating alternatives which consider grid equity metrics, including evaluating opportunities for alternative sources of funding for distribution system upgrades. *See*, *id*.[62]

As noted above, DTE takes exception, arguing that it provided testimony regarding energy justice which it contends addresses "apparent misperceptions regarding the 4.8 kV system, explaining for example that most areas of the system have sufficient capacity to incorporate some

[62] At pages 193-194 of the PFD, the ALJ made a similar recommendation finding that "a collaborative or other forum would be a preferable approach to explore options outside of the constraints of a 10-month rate case, which DTE [Electric] could file within 2 months of a Commission order in this case with little time for the anticipated analysis."

level of EVs and DERs, and that hardening does not in itself delay the conversion to 13.2 kV." DTE Electric's exceptions, p. 67 (citing 4 Tr 505-521).

In exceptions, the DAAOs note their support for the ALJ's findings but argue, however, that the recommendations "do not go far or fast enough" and that "it is not acceptable for certain groups of ratepayers, with clear distinctions along lines of race and income, to continue to receive measurably deficient service while paying the same rates." DAAOs' exceptions, p. 15.

In reply, DTE Electric reiterates that it provided a broad discussion of energy justice. DTE Electric's replies to exceptions, p. 11 (citing 4 Tr 505-521). The company avers that this addresses the various misperceptions of DTE Electric's 4.8 kV system, including arguing that the hardening efforts do not delay the conversion to 13.2 kV.

The DAAOs also reply, reiterating their position that DTE Electric's "[h]ardening program is racially and economically inequitable: it enables DTE [Electric] to keep low-income, BIPOC [Black, Indigenous, and people of color] residents on the less reliable and less safe 4.8 kV infrastructure, then de-prioritize these same communities for the more reliable, safer 13.2 kV infrastructure upgrades . . . ." DAAOs' replies to exceptions, p. 2.

As discussed previously in the rate base section, the Commission finds the ALJ's recommendation to be reasonable.

The Staff also recommended that the Commission:

> (1) adopt definitions for equity and related metrics for the energy infrastructure it regulates so all interested parties have a common understanding, (2) require the Company to include future analyses, like overlay maps, charts, graphs, and other displays, that provide a visual or data informed understanding of more holistic impacts of electric infrastructure investments on customer communities in future rate cases and distribution plans, and (3) request the Company work with Staff and interested stakeholders on a case study on the impact of socioeconomic data analysis and more comprehensive analysis of alternatives for the 4.8 kV system within the Company's metro Detroit fiber loop in its next rate case.

Staff's initial brief, p. 282 (citations omitted); *see also*, 8 Tr 5253-5254.

The ALJ concluded that the Staff's recommendations were reasonable and consistent with the company's DGP. PFD, p. 712 (citing 4 Tr 505-521).

No party filed exceptions on this issue.

The Commission agrees with the ALJ that the Staff's recommendation is reasonable. The Commission finds that adopting a shared definition of equity and creating energy infrastructure-related metrics are important issues to consider in the context of 4.8 kV conversion and are not limited to DTE Electric. The Commission also notes that several additional terms have been utilized in the context of equity discussions in this case such as environmental justice, energy justice, and grid equity.[63] In addition to equity, these additional terms should be explored and potentially defined as well.

The Commission notes that the EAAC was formed through the February 18, 2021 order in Case No. U-20757. On February 10, 2022, the Commission adopted the Staff's recommendations in Case No. U-20757 to create several subcommittees and extend the EAAC into at least 2023 with further assessment regarding the lifespan of the collaborative to be made in the future. *See*, February 10, 2022 order in Case No. U-20757 (February 10 order), pp. 13-14. As noted in the February 10 order, the Definitions-Ad Hoc Subcommittee would provide "a recommended energy affordability definition if consensus is reached or with options for an energy affordability definition if consensus is not reached" as well as "[w]ork with the Data and Regulatory Subcommittee and in consultation with the Commission's Diversity, Equity and Inclusion [DEI]

[63] In briefing, the CEOs noted that several terms were utilized "in assessing and analyzing the Company's rate case plan, and its effects on marginalized communities" which included environmental justice, energy justice, and grid equity. CEOs' initial brief, pp. 56-57 (citing 8 Tr 3690).

Team to build recommended data requirements for utilities to demonstrate energy affordability in appropriate dockets." *Id*, pp. 8-9. In addition, the Data Analysis and Regulatory Review subcommittee "was delegated the task of examining the long-term data collection strategy of the Commission that includes capturing specific demographic information and energy burdens of customers in coordination with the consideration of recommendations from the Commission's DEI initiative." *Id*., p. 10. Given these ongoing efforts, the Commission finds that the work necessary to define equity and related terms as well as establish metrics for the energy infrastructure would be appropriate in the EAAC and its subcommittees.

The Commission acknowledges the company's commitment to develop a comprehensive environmental justice plan for its distribution system considering the reliability of service in communities identified by the MiEJScreen tool, and continued efforts to work with the Staff to provide data at a more granular level. *See*, 4 Tr 513. In addition to this commitment, the Commission finds the Staff's second recommendation to be reasonable. Therefore, in future rate cases and distribution plans, DTE Electric shall "include future analyses, like overlay maps, charts, graphs, and other displays, that provide a visual or data informed understanding of more holistic impacts of electric infrastructure investments on customer communities." 8 Tr 5253.

The Commission also finds the Staff's request for DTE Electric to work with the Staff and interested stakeholders to develop "a case study on the impact of socioeconomic data analysis and more comprehensive analysis of alternatives for the 4.8 kV system within the Company's metro Detroit fiber loop" to be reasonable. Staff's initial brief, p. 282 (citing 8 Tr 5254). The Commission directs DTE Electric to file this study in a future rate case or distribution plan, informed by stakeholder input and reflecting the learnings derived from the technical conference(s) detailed above.

Given the above, the Commission agrees with the ALJ's determination that these Staff recommendations are reasonable and consistent with DTE Electric's DGP. Therefore, the Commission adopts the ALJ's recommendation.

B. Other Distribution Planning Concerns

MNSC made several recommendations regarding DTE Electric's DGP. *See*, MNSC's initial brief, pp. 162-167. Similarly, the CEOs continued to advocate for the Commission to require that distribution plans be subject to a contested case proceeding. *See*, CEOs' initial brief, p. 62.

The ALJ noted the additional concerns raised by the parties regarding DTE Electric's distribution system. However, she concluded that further recommendations not specific to DTE Electric's proposed or planned projects would not be beneficial in this proceeding in light of the September 8 order and the extensive discussion therein. PFD, p. 713.

In exceptions, the CEOs state that their recommendation to require DGPs to occur in contested proceedings was not adopted. The CEOs argue that "[t]he only way to ensure Utilities live up to their commitment made in the Grid Plans is to require that these plans be offered in contested proceedings" and, therefore, requests that their recommendation be adopted. CEOs' exceptions, p. 6.

DTE Electric replied to the CEOs' exception stating that it should be considered an improper exception as the CEOs have offered "no response, or any law or evidence to support their position . . . ." DTE Electric's replies to exceptions, p. 12.

In reply, the CEOs again reiterate their recommendation "that future distribution grid plans be offered in a contested case." CEOs' replies to exceptions, p. 12 (citing CEOs' initial brief, p. 62).

In the September 8 order, the Commission acknowledged stakeholder feedback regarding requiring contested proceedings for distribution plans. *See*, September 8 order, pp. 25-26, 33.

However, in that order the Commission concluded that "the current distribution planning process is the right approach at this time—a process that is providing transparency into utilities' plans for the future and that is lending aid to the Commission when making reasonableness and prudency determinations regarding cost recovery requests in general rate cases." *Id*., p. 66. The Commission also noted its commitment to evaluate future changes in circumstances and proceed accordingly to revisit the distribution plan framework, if necessary. The Commission reiterates this determination and again declines to adopt any changes in this proceeding.

In addition, the DAAOs advocated for an increase in outage credits, arguing that "[t]he Commission should require DTE [Electric] to provide outage credits that accurately account for the outage impacts that its customers experience." DAAOs' initial brief, p. 53. Similarly, MI-MAUI/Ann Arbor objected to the current and proposed tariff and requested that the Commission "impose outage credits that actually incentivize the Company to fix streetlights in a reasonable period of time." MI-MAUI/Ann Arbor's initial brief, p. 69; *see also*, *id*., pp. 69-75.

The ALJ concluded that recommendations regarding outage credits were beyond the scope of this proceeding "in light of the Commission's recent outage credit rules . . . ." PFD, p. 714.

MI-MAUI/Ann Arbor take exception to the ALJ's finding. Specifically, MI-MAUI/Ann Arbor cite to Case No. U-20963 to argue that the Commission can appropriately address the proposal regarding automatic streetlight outage credits in the instant case. MI-MAUI/Ann Arbor's exceptions, pp. 16-17 (citing December 22 order, p. 392). In addition, MI-MAUI/Ann Arbor argue that the Commission found their proposal to address automatic streetlight outage credits to be more appropriately addressed through special tariffs rather than the rulemaking in Case No. U-20629, and therefore, argues that this is the appropriate proceeding to address the proposal. MI-MAUI/Ann Arbor's exceptions, p. 17 (citing March 17, 2022 order in Case No. U-20629

(March 17 order), p. 10). MI-MAUI/Ann Arbor conclude that “streetlighting customers should not be required to pay the same amount whether a streetlight is working or not – when DTE [Electric] becomes aware that a customer is not receiving service, it should stop charging that customer for that service” and that without such automatic credits in the streetlighting tariff, “streetlighting customers are effectively subsidizing other customers by paying for service they do not receive.” MI-MAUI/Ann Arbor’s exceptions, p. 17.

DTE Electric replies that MI-MAUI/Ann Arbor’s exceptions cite to the Consumers rate case which involves “a different company, a different tariff, and a different record,” predates the outage credit rule revision, and “neglect[s] the significance of the Commission’s recent outage credit rules . . . .” DTE Electric’s replies to exceptions, p. 67. Further, the company reiterates its rebuttal to MI-MAUI/Ann Arbor’s proposal arguing that it “is unreasonable,” “based upon an analysis that is flawed,” and “fails to account for follow up outage events involving solutions beyond the Company’s control.” *Id*., pp. 67-68. DTE Electric further reiterated its record arguments in response to MI-MAUI/Ann Arbor’s position. *See*, DTE Electric’s replies to exceptions, pp. 68-70.

As noted by the ALJ, the Commission is in the process of amending the rules governing the service quality and reliability standards for electric distribution systems (Mich Admin Code, R 460.701-R 460.752) including customer accommodation (outage credit) rules contained in Part 4. *See*, March 17 order. Given this ongoing rulemaking, the Commission agrees with the ALJ’s finding that further evaluation of an increase in outage credits is not appropriate, at this time. Therefore, the ALJ’s findings and conclusions are adopted on the issue of increased outage credits.

With respect to MI-MAUI/Ann Arbor’s proposal regarding streetlight outage credits, the Commission agrees that the proposal is not outside the scope of this rate case. Nevertheless, the

Commission agrees with DTE Electric that MI-MAUI/Ann Arbor's reference to Case No. U-20963 pertains to different parties with a different evidentiary record. As part of their proposal, MI-MAUI/Ann Arbor requested for the Commission "to impose outage credits that actually incentivize the Company to fix streetlights in a reasonable period of time" including an increase in outage credits to incentivize fixing streetlights in less than a month. MI-MAUI/Ann Arbor's initial brief, p. 69. The Commission finds that there is insufficient evidence on the record in the present case to support this recommendation and therefore declines to adopt MI-MAUI/Ann Arbor's recommendations regarding streetlight outage credits. The Commission notes, however, that parties are not precluded from presenting similar proposals with more support in the future.

C. Classification of Emergent Capital Expense

In the company's last rate case, the Commission raised concerns with gaining a better understanding of the expenses assigned to the emergent replacement category. Therefore, the Commission directed DTE Electric "to provide a detailed description of each type of expenditures assigned to the emergent replacements category," in its next general rate case and directed "the Staff to provide an analysis of the expenditures that are capitalized in this category." May 8 order, pp. 86-87.

In response, the Staff set forth an analysis which "focuses on whether the capital expenditures assigned to the emergent replacements are appropriately classified as spend that is truly unplanned, reactive, and aligned with the Company's emergent program purpose." 8 Tr 5402. The Staff noted that it found "there is spend assigned to the emergent replacements program not aligned with the program's purpose as described by the Company - to perform emergency replacement work for retirement unit items on the overhead and underground subtransmission and distribution systems and in substations that have failed" and that "there is spending not assigned to the emergent replacements program but is aligned with the program's purpose." 8 Tr 5403-5404. Therefore, the Staff recommended that:

> 1) The Company shall begin tracking equipment identified as imminent failure (near failure but has not failed) and exclude those costs from the emergent replacements capital program.
>
> 2) The Company shall revisit the emergent replacements capital spend program currently used and re-assign, where necessary, spend that does not align with the purpose of emergent replacements.
>
> 3) The Company shall revisit the customer connections, relocations & other and strategic capital spend programs currently used and re-assign, where necessary, spend that aligns with the purpose of emergent replacements.

8 Tr 5404-5405.

DTE Electric disputed the Staff's recommendation, arguing that "[t]racking these categories separately would seem unnecessary, and require significant adjustments to the work management system and work tracking process that includes additional training and time requirements for field personnel, given the similar need to immediately replace the equipment whether it has already failed or failure is deemed imminent." 4 Tr 497.

The ALJ recommended that the Commission order the company:

> to work with Staff on a format for the disclosures that Staff wants to see, taking into account the limits of DTE [Electric's] current record keeping, with the expectation that DTE [Electric] will report the agreed-upon information in its next filing and discuss those Staff requests it is not able to address.

PFD, p. 717.

No exceptions were filed on this issue.

The Commission agrees with the ALJ's recommendation and finds that proactive maintenance is appropriate, and that money should be reasonably and prudently spent where necessary. However, expenditures must also be properly organized and classified—as strategic for those expenditures that consist of proactive, planned spend aimed at improving reliability by strengthening the system and reducing the risk of interruptions versus emergent for those expenditures that are truly unplanned, reactive, and aligned with the company's emergent program purpose. Therefore, the Commission adopts the ALJ's findings and recommendations on this issue.

D. Capitalization Practices

The Staff recommended that the Commission order DTE Electric to convene with the Staff and stakeholders "to evaluate the Company's current capitalization procedures as they relate to the capitalization of pole inspection and testing spend and provide additional information in the Company's next electric rate case." Staff's initial brief, p. 276. In addition, the Staff recommended that DTE Electric be required to:

> 1) provide a thorough breakdown of the total pole inspection/test costs applied across all capital programs/subprograms, 2) support why these costs are appropriately classified as capital instead of O&M with reference(s) to accounting guidance, and 3) amend the classification of these expenditures in the Company's next rate case, where necessary, based on the analysis.

8 Tr 5413. Similarly, MNSC raised several concerns regarding "overcapitalization" which it describes as the "improper or unreasonable capitalization of program associated O&M expenses." 8 Tr 3999; *see also*, MNSC's initial brief, pp. 87-88. MNSC requested that the Commission require the company to submit detailed information in its next general rate case to enable the Commission and stakeholders to evaluate whether expenses are appropriately allocated. *See*, 8 Tr 4014-4015.

The ALJ concluded that DTE Electric failed to demonstrate clarity and transparency regarding its capitalization policies. The ALJ found that the concerns addressed on this record "rise to a sufficiently significant level that the Commission should either require the reporting and stakeholder group that Staff requests, or elevate this matter to the level of an official Commission investigation of the company's accounting." PFD, p. 719. Further, the ALJ noted that the capital expenditures are becoming increasingly difficult to review in the statutory time constraints of a general rate case with the "total for distribution and IT system spending alone approximately $1 billion in 2020, with the company's projected test year capital expenditures in these two areas equal to more than $1.5 billion." *Id*. (citing Exhibit A-12, Schedule B5).

In exceptions, MNSC notes its support for the ALJ's recommendation for the Commission to conduct an official investigation into DTE Electric's capitalization practices rather than a workgroup which would include only limited voluntary disclosures. *See*, MNSC's exceptions, p. 7. MNSC states that the Commission has authority to conduct such an investigation under MCL 460.56 and MCL 460.6. Further, MNSC avers that an investigation is more appropriate because, even with numerous rounds of discovery, MNSC was unable to gain clarity into the company's accounting practices and DTE Electric "has not demonstrated a willingness to engage with anyone beyond Staff on this matter." MNSC's exceptions, p. 8. If, however, the Commission declines to conduct an investigation, MNSC recommends that all interested stakeholders should be allowed to participate in a stakeholder workgroup as suggested by the Staff.

In reply, DTE Electric avers that MNSC's agreement with the ALJ's recommendation is not a proper exception but "notes that it has already agreed to address the parties' indicated concerns through reports and a meeting, as indicated above, so no further action is necessary." DTE Electric's replies to exceptions, p. 17. DTE Electric also contends that the issue is moot because in the October 5 order, the Commission ordered the initiation of an audit into accounting practices. DTE Electric's replies to exceptions, p. 18 (citing October 5 order, p. 16).

The Commission shares the ALJ's concern regarding the company's capitalization policies. The Commission also finds that the Staff's recommendations are reasonable and will assist in providing greater transparency into the company's capitalization practices in DTE Electric's next rate case. Therefore, as part of the company's next general rate case, DTE Electric shall: (1) provide a thorough breakdown of the total pole inspection and test costs which are applied across all capital programs and subprograms, (2) support why these costs are appropriately classified as capital costs instead of O&M with reference or references to accounting principles and guidance, and (3) amend the classification of these expenditures, where appropriate, based upon the analysis. *See*, 8 Tr 5413; *see also*, Staff's initial brief, pp. 277-278. The company shall also provide a similar breakdown of its Plant & Field Core Operations IT project costs, consistent with the concerns raised by the Staff. *See*, 8 Tr 5227-5230. In addition, the company shall also provide explanations on why the classifications of expenditures were not modified if DTE Electric maintains its position consistent with the Staff's position. *Id*.

The Commission finds that the concerns raised in this proceeding regarding capitalization policies are not limited to DTE Electric. Utility capitalization policies are an ongoing concern for the Commission which warrants further investigation. However, given the broad scope of capitalization concerns, the Commission declines to require a stakeholder proceeding or a limited investigation specific to DTE Electric, at this time. As noted by DTE Electric, the October 5 order initiated "an audit of each utility's programs and processes" which "will include an audit of the accounting process for the distribution system to ensure costs are being accurately managed and recorded." October 5 order, p. 15. However, the Commission does not find this audit to render the concerns relating to capitalization policies to be moot given the purpose of that audit is "to determine whether the existing programs and processes for emergency preparedness, storm restoration, distribution system maintenance, and investment are sufficient and equitable, and whether they properly plan for climate change and changing load profiles." *Id*. As such, more information will be forthcoming regarding the next steps in evaluating utility capitalization policies.

E. Performance Based Ratemaking

DTE Electric did not set forth a performance-based ratemaking mechanism as part of its case but did discuss performance-based ratemaking in its DGP. *See*, 4 Tr 529-530; *see also*, Exhibit A-23, Schedule M1. DTE Electric explained that, while it agreed to provide a performance-based ratemaking proposal in the next general rate case following the conclusion of Case No. U-20147, "[t]he Company is awaiting an Order from the Commission on the [performance-based ratemaking] plan included in its DGP" and that it would not "have been productive for the Company to propose a [performance-based ratemaking] mechanism in this rate case prior to receiving Commission feedback clarifying the appropriate parameters." 4 Tr 529-530. The CEOs requested that the Commission provide the feedback requested by the company in this proceeding and then require the filing of a performance-based ratemaking plan within 180 days. CEOs' initial brief, p. 69.

The ALJ recommended that the Commission consider performance-based ratemaking proposals from all parties including DTE Electric in the company's next general rate case. PFD, p. 720.

The DAAOs filed exceptions stating that the ALJ's recommendation was appreciated. However, the DAAOs argue that "there is nothing preventing the Commission from considering performance more generally in its ruling in the instant case." DAAOs' exceptions, p. 15.

The Commission agrees with the ALJ's recommendation that proposals can be more fully considered in the company's next general rate case. The Commission also recently held that:

> the Commission finds what was submitted by the utilities in their distribution plans to be insufficient to address the issue of financial incentives and penalties at this time. In this regard, a MI Power Grid order is anticipated to be issued by the end of this year, which will initiate a workgroup to focus on the creation of appropriate financial incentives and penalties to address outages and distribution performance moving forward. Additional guidance on the focus of this workgroup will be provided at that time.

September 8 order, p. 46. Therefore, the Commission anticipates providing further guidance on this issue by the end of the year or soon thereafter.

F. Contributions in Aid of Construction

In the May 8 order, the Commission directed the company to:

> (1) provide supplementary, substantial, and specific support of the current CIAC model, (2) demonstrate that the current CIAC model is cost-of-service based, (3) provide evidence specifically showing how the overall revenues from new customer connections help offset other customer costs, and (4) provide details regarding how new customer connections drive upgrades to the system that may benefit other customers.

May 8 order, p. 98. In this case, DTE Electric responded by providing a comparison of its current CIAC model to the MNSC proposal in Case No. U-20561. *See*, 6 Tr 954-958. MNSC argued that the Commission should reject the company's current CIAC policy because it creates a cross-class subsidy. MNSC further recommended that, through the CIAC workgroup,[64] parties should

[64] On December 17, 2020, the Commission issued an order directing the Staff to "to convene a work group in 2021 to consider updates to CIAC policies." December 17 order, p. 331. This workgroup is referred to as the "CIAC workgroup" in this order. On January 15, 2022, the CIAC workgroup issued its initial report in Case No. U-20697 (the CIAC workgroup report). The CIAC workgroup report noted that "[w]hile the workgroup was created in response to the Commission order in the Consumers case, DTE [Electric] was invited to and participated in the meetings in anticipation of CIAC issues being addressed in its next rate case." CIAC workgroup report, p. 4 (Case No. U-20697, filing #U-20697-0568).

explore "an alternative approach" which "maintains the existing CIAC allowances (recognition of both distribution and power supply revenues), but ameliorates the cross-class subsidy issue." 8 Tr 4036. DTE Electric noted its disagreement with the "underlying premise that there is something wrong with the current CIAC policy." DTE Electric's reply brief, p. 84. However, the company added that it would continue its participation in the CIAC workgroup if the Commission deems it appropriate while emphasizing that "[a]ny continuation of the CIAC Workgroup should not be driven by MNSC's apparent preferences or otherwise be used to support an inappropriate position that the Commission declined to adopt in Case No. U-20561." DTE Electric's reply brief, p. 84.

In addition to MNSC's concerns, MI-MAUI/Ann Arbor argued that customers should not be charged CIAC as part of streetlight removal requests and that "a much more efficient and fair approach to recovering costs of customer-requested removals would be to recover them in net salvage value payments that are a part of depreciation expense." 8 Tr 3483. MI-MAUI/Ann Arbor further assert that, "[a]t the very least, the Commission should order [the Staff] to audit the Company's assessment of CIAC fees to determine if they are fair and reasonable." 8 Tr 3482. DTE Electric responded to MI-MAUI/Ann Arbor's position, arguing that it "would result in the Company recording a higher expense on its books and charging all remaining customers for the cost of such a removal which is an unfair subsidization between customers." 7 Tr 1767.

The ALJ addressed the parties' positions on CIAC at pages 720 to 725 of the PFD. In addition, she summarized the CIAC workgroup report noting that:

> The CIAC Workgroup provided several recommendations to the Commission for considering CIAC policy in the future, including: (1) further consider updating the cost per foot of line extensions presented in tariffs, as whatever data used to create this allowance is likely obsolete; (2) only change CIAC policy in general rate cases and not standalone proceedings due to the influence such a change could have on the revenue requirement, rates, and individual customers; and (3) continue CIAC

> workgroup meetings to further develop known issues and allow new proposals to be submitted and discussed.

PFD, p. 725 (footnote omitted); *see also*, CIAC workgroup report, p. 17.

The ALJ found the recommendation to continue discussion of CIAC recommendations through the CIAC workgroup to be reasonable. She reasoned that "[b]ecause the CIAC workgroup itself recommended that it continue to meet and further develop known issues and new proposals, this would appear the most appropriate outcome for MNSC's alternative proposal." PFD, p. 725. In addition, the ALJ stated that any change to the CIAC would have significant effects which are more appropriately considered through the workgroup process as the time constraints of a 10-month rate case do not allow for in-depth review of proposals such as these but that "any changes should ultimately be adopted in a general rate case." *Id*. Further, the ALJ concluded that MI MAUI/Ann Arbor's concerns regarding the determination of CIAC for streetlighting programs should be evaluated through the CIAC workgroup. *Id*., pp. 725-726.

MI-MAUI/Ann Arbor take exception to the referral of concerns regarding the determination for appropriate CIAC for streetlighting programs to the CIAC workgroup. Specifically, MI-MAUI/Ann Arbor state the concern with this recommendation is that DTE Electric has been instructed to provide information in the instant case regarding its streetlight CIAC model. However, MI-MAUI/Ann Arbor contend that the company did not follow the Commission's directives and rather "repeated prior testimony nearly verbatim, identified publicly available information as confidential in discovery responses, and said it could not provide a breakout of CIAC in dollars for an LED to HID conversion, although it had provided estimates to customers that are public entities." MI-MAUI/Ann Arbor's exceptions, p. 13 (citing 8 Tr 3462). Therefore, MI-MAUI/Ann Arbor express concern whether a voluntary workgroup is the appropriate venue for addressing their concerns and restate their position that "the Commission should amend the streetlighting CIAC tariff for LED conversions from HID streetlights to a maximum of $14.96 per streetlight, and then if desired, use the voluntary workgroup to explore any justification for raising that amount." MI-MAUI/Ann Arbor's exceptions, p. 13.

In reply, DTE Electric contends that the ALJ appropriately referred the issues surrounding CIAC to the workgroup. DTE Electric's replies to exceptions, p. 19. The company further responds that MI-MAUI/Ann Arbor's "desire to have conversion costs excluded from CIAC inappropriately places the cost burden of HPS [high pressure sodium] conversions on customers to the benefit of individual communities with predominantly HPS lighting systems, including Ann Arbor." *Id*.

The Commission finds that the ALJ's recommendation is well-reasoned. While the Commission recognizes and shares MI-MAUI/Ann Arbor's frustrations, the Commission agrees with the ALJ that the workgroup process will allow for more in-depth review of their CIAC concerns. *See*, PFD, p. 725. Therefore, the Commission adopts the ALJ's recommendation to continue discussion of the concerns regarding DTE Electric's CIAC policy through the CIAC workgroup.

G. Alternative Distribution Pilots

MNSC recommended that the Commission direct DTE Electric to pilot different techniques for distribution system management. *See*, MNSC's initial brief, pp. 157-161. MNSC argued that continuous asset monitoring would be beneficial as the company's current monitoring has significant periods between asset evaluations which has clear limitations. 8 Tr 4024-4025. DTE Electric expressed interest in the learnings but noted that the company has begun the investigation and a Commission directive to do such is unnecessary. 4 Tr 536. In briefing, DTE Electric further noted its objection to the Commission directing pilots citing *Union Carbide Corp v Pub Serv Comm*, 431 Mich 135; 428 NW 2d 322 (1988). *See*, DTE Electric's reply brief, pp. 125-126.

The ALJ recommended that the Commission direct DTE Electric "to confer with MNSC so that it has an understanding of the technology at issue and consider that as part of what it considers an ongoing evaluation of new technologies." PFD, p. 726. Further, the ALJ acknowledged DTE Electric's objections under *Union Carbide*, but noted that "the Commission may want to remind DTE [Electric] that it has an obligation to establish that its projected capital and O&M distribution system maintenance and improvement expenses are reasonable and prudent, which requires that it show that it has considered reasonable alternatives to its own proposals." PFD, pp. 726-727.

In exceptions, MNSC notes its support for the ALJ's recommendation on this issue. However, MNSC takes exception "to add that the Commission should expressly document its perspective on this recommendation in the final order in this matter" adding that "*Union Carbide* does not immunize the Company from Commission recommendations regarding the evidence necessary to support the reasonableness of its proposed investments." MNSC's exceptions, pp. 10-11. MNSC reiterates its record proposal regarding Distribution Fault Anticipation (DFA) technology and contends that the Commission should expressly note that DTE Electric should provide data and reporting specific to DFA technology and other continuous monitoring systems to support its increasing distribution capital investments. *Id.*, p. 12.

DTE Electric replies to MNSC's exceptions, arguing first that the exceptions are not proper under the Commission's rules. Further, the company avers that MNSC's exceptions attempt "to persuade the Commission to apply an incorrect evidentiary standard and expressly indicate agreement with MNSC's flawed views regarding the law." DTE Electric's replies to exceptions, p. 40. DTE Electric further states that it is not clear what MNSC is proposing and that any benefits identified by MNSC are purely speculative. The company reiterates its record position that it "is already exploring machine learning, so any further direction is unnecessary." *Id*., p. 41 (citing 4 Tr 536).

The Commission agrees with the ALJ's findings and recommendations. Specifically, the Commission reiterates the ALJ's conclusion that *Union Carbide* does not excuse the company's obligations to demonstrate that its expenses are reasonable and prudent, including demonstrating that it has conducted an evaluation of reasonable alternatives. *See*, PFD, p. 727. This is consistent with the Commission's determination in DTE Electric's last rate case, where the Commission noted that DTE Electric "continues to bear the burden of showing that it's [sic] proposed expenditures are reasonable and prudent, and consideration of alternatives . . . are an important element in demonstrating why its proposed expenditures are preferable to other options. Such evaluations are inherently part of the rate case process." May 8 order, p. 112; *see also,* December 22 order, p. 84. Therefore, the ALJ's findings and recommendations are adopted on this issue.

MNSC also recommended that the Commission require the company to undertake a pilot to test a variable tree trimming cycle including reporting on reliability benefits and cost savings. 8 Tr 4030-4034; *see also*, MNSC's initial brief, pp. 153-154. DTE Electric again responded that adoption of MNSC's proposal "is not necessary as the Company continues to explore opportunities to improve efficiencies in the Tree Trimming program, including considering the benefits that may come from a variable cycle." DTE Electric's reply brief, p. 141.

The ALJ found that the company's representation in briefing was sufficient to resolve the issue regarding MNSC's proposed tree trimming pilot given that DTE Electric is "expected to provide an update on its analysis in its next rate case." PFD, p. 727.

MNSC again takes exception, requesting the Commission to directly address its recommendation and "make clear that the Company should be evaluating efficiencies, including specifically variable cycle tree trimming, consistent with [MNSC's] clear, well-supported, and unrebutted testimony." MNSC's exceptions, p. 13.

DTE Electric replies that "it appears that MNSC is requesting that the Commission tell the Company that it should be doing what the Company already said it is doing, which is unnecessary." DTE Electric's replies to exceptions, p. 104. DTE Electric further states that MNSC's recommendation in exceptions to direct the company how to run its business is unlawful, and "the Commission should consider this issue resolved as the [ALJ] recommends." *Id*.

The Commission agrees with the ALJ's determination. Further, the Commission reiterates that, in its next general rate case, DTE Electric is expected to provide an update on its analysis regarding its tree trimming program, including improving efficiency and evaluating potential benefits from utilizing a variable cycle, as the ALJ concluded. *See*, PFD, p. 727. Therefore, the ALJ's findings and recommendations are adopted on this issue.

H. Electrification Pilot

MNSC also proposed that the Commission should direct DTE Electric to develop a residential pilot program for electrifying propane, fuel oil, and kerosene-heated homes in the company's service territory. *See*, 8 Tr 4092-4093. DTE Electric opposed such a proposal, again citing *Union Carbide*. DTE Electric's reply brief, pp. 125-126.

The ALJ recognized that directing DTE Electric to undertake a pilot that it had not designed and does not desire to pursue is a challenge. Therefore, she recommended directing the company to "explicitly evaluate the potential increase in demand that may be anticipated from the increasing availability of heat pumps relative to the cost of alternative heating systems as part of its sales and monthly peak demand forecasts in future rate cases and in its upcoming IRP." PFD, p. 728.

MNSC takes exception, arguing that *Union Carbide* does not preclude the Commission from directing DTE Electric "to evaluate market demand for heat pumps operating with electricity provided by DTE [Electric], and to evaluate potential costs and overall customer savings associated with increased electric sales resulting from such conversions . . . ." MNSC's exceptions, p. 15. MNSC avers that such direction is not directing management decisions but is providing direction regarding evidence needed to support requested rate increases and IRP applications. *Id*. Additionally, MNSC requests that the Commission expressly direct the company to "collect, evaluate, and report data related to heat pump demand, as well as costs and savings between fossil-fueled and alternative electrified heating systems" and include the analysis as part of DTE Electric's sales and monthly peak demand forecasts in future rate cases and the upcoming IRP proceeding. *Id*.

DTE Electric replied that MNSC's exceptions on this issue are not proper exceptions under the Commission's rules. Further, the company argues that MNSC is requesting the Commission to go beyond its authority to request reports under MCL 460.55 and "unlawfully assert[] management control (among other things) to require the Company to undertake a project in order to 'report' on it" which DTE Electric contends is overreaching. DTE Electric's replies to exceptions, p. 39.

The Commission agrees with the ALJ and declines to direct DTE Electric to develop a pilot, on this, at this time. Nevertheless, the ALJ's recommendation to evaluate the increase in demand potential due to the increased availability of heat pumps in the company's sales and monthly peak demand forecasts in future proceedings is reasonable. Therefore, the ALJ's recommendation on this issue is adopted.

I. Conservation Voltage Reduction and Volt-Var Optimization Reporting

In addition to the CVR/VVO issues discussed above, the Staff requested in briefing that, in its next general rate case, DTE Electric be required to provide:

> 1) actual and projected capital expenditures for CVR for every year from 2019 through the test year;
> 2) actual and projected O&M expenses for CVR for every year from 2019 through the test year;
> 3) annual energy savings;
> 4) cumulative energy savings;
> 5) annual customer cost savings;
> 6) cumulative customer cost savings.

Staff's initial brief, p. 47 (citing 8 Tr 5434).

The ALJ found that the company did not object to the Staff's proposal. Further, she concluded that the Staff's proposal appears reasonable. PFD, p. 728.

No exceptions were filed on this issue.

The Commission agrees with the ALJ that the Staff's proposal is reasonable. Therefore, in its next general rate case, DTE Electric shall provide the information, as set forth above.

THEREFORE, IT IS ORDERED that:

A. Based on the findings in this order adopting a November 1, 2022 through October 31, 2023 test year, a jurisdictional rate base of $20,406,679,000, an authorized rate of return on common equity of 9.90%, and an authorized overall rate of return of 5.42%, DTE Electric Company is authorized to implement rates that increase its annual electric revenues by $30,557,000, on a jurisdictional basis, over the rates approved in the May 8, 2020 order in Case No. U-20561.

B. DTE Electric Company is authorized to implement rates consistent with the revenue deficiency approved by this order on a service rendered basis for service provided on and after November 25, 2022, as reflected in Attachment A (a summary of revenue by rate class), Attachment B (tariff sheets), and Attachment C (updated calculation of the capacity charge) to this order. Within 30 days of the date of this order, DTE Electric Company shall file tariff sheets substantially similar to Attachment B. When filing the tariffs consistent with those ordered, DTE Electric Company shall also update the Standard Allowance amounts on Tariff Sheet C-30.00, Section C6.2(4)(a), to be consistent with the rates approved in this order. DTE Electric Company shall implement a state reliability mechanism capacity charge of $117,750 per megawatt-year, or $322.60 per megawatt-day, for customers taking capacity service, as shown on Attachment C to this order. Attachment B contains the associated capacity rates.

C. As set forth in the order and agreed to by DTE Electric Company, the company shall write-off any disallowed actual capital removal expenditures for projects involving its Monroe, Connors Creek, River Rouge, and Trenton Channel power plants and shall record a regulatory liability for the "return on" the costs included in base rates for refund to customers. The company shall further provide detailed cost information in its next depreciation case comparing the actual project scope and costs to the previously approved project scope and costs.

D. In future general rate cases, DTE Electric Company shall include a schedule detailing the company's removal-cost-related adjustments to the accumulated provision for depreciation.

E. In its next general rate case, DTE Electric Company shall present further evidence on the effect of the company's capital investments over recent years on productivity benefits and any continued need for inflationary adjustments to historical data in determining capital expenditures for emergent replacements in the future.

F. The parties shall conduct one or more technical conferences in the first quarter of 2023, as set forth in this order, to fully explore the benefits and costs of 4.8 kilovolt hardening versus other alternatives such as conversion or tree trimming.

G. In DTE Electric Company's next general rate case, the company shall provide actual and projected capital expenditures for conservation voltage reduction for every year from 2019 through the test year, the actual and projected operations and maintenance expenses for conservation voltage reduction for every year from 2019 through the test year, annual energy savings, cumulative energy savings, annual customer cost savings, and cumulative customer cost savings.

H. In its next general rate case, DTE Electric Company shall provide an updated analysis of its streetlight re-lamping policy and wattage selection.

I. In its next general rate case, DTE Electric Company shall include deferred accounting treatment for its pension expense as a regulatory asset if positive, and as a regulatory liability if negative.

J. In its next general rate case, DTE Electric Company shall file an exhibit containing an itemized list of projected costs associated with membership fees.

K. DTE Electric Company shall work with the Commission Staff prior to the filing of its next general rate case to ensure that cross-subsidization of merchant fees does not occur between residential customers with access to credit and those without.

L. In its next general rate case, DTE Electric Company shall record the over- or underrecovery of incentive compensation expenses, compared to the 60% base for operational measures, in a regulatory asset or regulatory liability.

M. In its next general rate case, DTE Electric Company shall present clear operational metrics for employee incentive compensation programs.

N. In its next general rate case, DTE Electric Company shall prepare and submit a full scale, well-developed, permanent Charging Forward proposal that includes a benefit/cost analysis, as discussed in this order.

O. DTE Electric Company shall work with the Commission Staff toward the full development of the Commission Staff's proposed limited recovery of outage credits, as discussed in this order.

P. DTE Electric Company shall, within 90 days from the date of this order, supplement its voluntary green pricing application in Case No. U-21172 with a proposal for amendments to Riders 17 and 18 to accommodate the company's purchase of renewable energy credits from the company's distributed generation customers to be applied to the company's voluntary green pricing program.

Q. Within 90 days from the date of this order, DTE Electric Company shall file, in a new docket that shall be conducted as a contested proceeding, an application describing the options available to customers with distributed generation systems should DTE Electric Company decide to cap participation in its current distributed generation program consistent with MCL 460.1173(3), which may include the company's Riders 5 and 14, with supporting justification.

R. In its next general rate case, DTE Electric Company shall file a proposal to reduce the reservation fee for fuel cell systems, based on the forced outage rate for these systems, or provide justification as to why it is unreasonable to do so.

S. In its next general rate case, DTE Electric Company shall file a proposal to eliminate the administrative charge in its Rider 10 tariff, or, in the alternative, a proposal for an administrative charge that is based on the company's cost to serve Rider 10 customers, along with evidentiary support for any revised charge.

T. DTE Electric Company shall file in Case No. U-20757, within 120 days from the date of this order, a report detailing the company's current approach to enrolling customers in the Low-Income Assistance program with current enrollment data from 2021 and 2022 (through the end of

2022). Following the submission of DTE Electric Company's report, the Commission directs the Energy Affordability and Accessibility Collaborative to initiate, according to a schedule set by the collaborative, a stakeholder discussion of enrollment in the Low-Income Assistance program and submit a report and recommendations to the Commission.

U. DTE Electric Company shall, within 90 days from the date of this order, supplement its voluntary green pricing application in Case No. U-21172 with a straw proposal of a Rider 17 community solar project as described in this order.

V. The Energy Affordability and Accessibility Collaborative and its subcommittees shall work to define equity and related terms as well as establishing metrics for the energy infrastructure.

W. In future general rate cases and distribution plans, DTE Electric Company shall include future analyses, like overlay maps, charts, graphs, and other displays, that provide a visual or data informed understanding of more holistic impacts of electric infrastructure investments on customer communities.

X. As described in the order, DTE Electric Company shall develop a case study on the impact of socioeconomic data analysis and more comprehensive analysis of alternatives for the 4.8 kilovolt system within the company's metro Detroit fiber loop, to be filed in a future general rate case or distribution plan.

Y. DTE Electric Company shall begin tracking equipment identified as imminent failure (near failure but has not failed) and exclude those costs from the emergent replacements capital program.

Z. DTE Electric Company shall revisit the emergent replacements capital spend program currently used and re-assign, where necessary, spend that does not align with the purpose of emergent replacements.

AA. DTE Electric Company shall revisit the customer connections, relocations & other program and the strategic capital spend programs currently used and re-assign, where necessary, spend that aligns with the purpose of emergent replacements.

BB. DTE Electric shall work with the Commission Staff on a format for the disclosures that the Commission Staff wants to see regarding emergent replacements and strategic capital, while considering DTE Electric Company's record keeping limitations, and DTE Electric Company shall report the agreed-upon information in its next general rate case filing and further report on the Commission Staff's requests it is not able to address.

CC. As part of the company's next general rate case, DTE Electric Company shall: (1) provide a thorough breakdown of the total pole inspection and test costs which are applied across all capital programs and subprograms, (2) support why these costs are appropriately classified as capital costs instead of operations and maintenance with reference or references to accounting principles and guidance, and (3) amend the classification of these expenditures, where appropriate, based upon the analysis. As described in this order, the company shall also provide a similar breakdown of its Plant & Field Core Operations Information Technology project costs, consistent with the concerns raised by the Commission Staff. In addition, the company shall also provide explanations on why the classifications of expenditures were not modified if DTE Electric Company maintains its position.

DD. Discussion of the concerns regarding DTE Electric Company's contributions in aid of construction policy through the contributions in aid of construction workgroup as established in Case No. U-20697 shall continue.

EE. In its next general rate case, DTE Electric Company is expected to provide an update on its analysis regarding its tree trimming program, including improving efficiency and evaluating potential benefits from utilizing a variable cycle.

FF. In future general rate case applications, DTE Electric Company shall include the components and methodology of its state reliability mechanism capacity charge proposals, as described in this order.

GG. DTE Electric Company shall include as part of its next distribution plan a detailed description of its plans relating to grid hardening and conversion, including anticipated timelines, and also include learnings derived from the technical conference(s) and consistent with the expectations outlined in the September 8, 2022 order in Case No. U-20147.

HH. As set forth in this order, for the electric distribution system audit ordered in Case No. U-21305, the Commission Staff shall include the comparison of relative benefits and costs of 4.8 kilovolt hardening versus other alternatives, such as conversion or tree trimming, in the audit scope.

The Commission reserves jurisdiction and may issue further orders as necessary.

Any party desiring to appeal this order must do so in the appropriate court within 30 days after issuance and notice of this order, under MCL 462.26. To comply with the Michigan Rules of Court's requirement to notify the Commission of an appeal, appellants shall send required notices to both the Commission's Executive Secretary and to the Commission's Legal Counsel. Electronic notifications should be sent to the Executive Secretary at mpscedockets@michigan.gov and to the Michigan Department of Attorney General – Public Service Division at pungp1@michigan.gov. In lieu of electronic submissions, paper copies of such notifications may be sent to the Executive Secretary and the Attorney General – Public Service Division at 7109 W. Saginaw Hwy., Lansing, MI 48917.

MICHIGAN PUBLIC SERVICE COMMISSION

Tremaine L. Phillips, Commissioner

Katherine L. Peretick, Commissioner

By its action of November 18, 2022.

Lisa Felice, Executive Secretary

DTE Electric Company
Case No. U-20836
Present and Proposed Revenue
by Rate Schedule
FOR ORDER

Michigan Public Service Commission
DTE Electric Company
Present and Proposed Revenue
by Rate Schedule
FOR ORDER

Case No.: U-20836
ATTACHMENT A

Total Revenues

Line No.	(a)	(b) Total Present Revenue ($000's)	(c) Total Proposed Revenue ($000's)	(d) Total Net Increase/ (Decrease) ($000's)	(e) Total Net Increase/ (Decrease) (%)
	Residential				
1	D1/D1.6 Residential	$2,586,384	$2,598,576	$12,192	0.5%
2	D1-A TOU Pilot	$8,805	$8,855	$50	0.6%
3	D1-B TOU Pilot	$8,841	$8,892	$50	0.6%
4	D1.1 Int. Air	$53,333	$53,328	($6)	(0.0%)
5	D1.2 TOD	$28,026	$27,823	($203)	(0.7%)
6	D1.7 TOD	$15,071	$15,149	$78	0.5%
7	D1.8 Dynamic	$37,506	$37,775	$269	0.7%
8	D1.9 Elec. Vehicle	$927	$928	$1	0.1%
9	D2 Elec. Space Heat	$46,319	$45,510	($809)	(1.7%)
10	D5 Res. Water Ht.	$14,825	$14,922	$97	0.7%
11	Total Residential	$2,800,038	$2,811,757	$11,719	0.4%
12					
13	**Secondary**				
14	D1.1 Int. Air	$659	$668	$9	1.4%
15	D1.7 TOD	$1,071	$1,150	$79	7.4%
16	D1.8 Dynamic	$133	$135	$2	1.4%
17	D 1.9 Elec Vehicle	$7	$7	($0)	(0.6%)
18	D3/D3.5 Gen. Serv.	$932,920	$943,234	$10,314	1.1%
19	D3.1 Unmetered	$10,055	$10,027	($28)	(0.3%)
20	D3.2 Sec. Educ.	$43,517	$46,591	$3,074	7.1%
21	D3.3 Interruptible	$8,143	$8,302	$159	1.9%
22	D4 Lg. Gen. Serv.	$259,936	$255,193	($4,743)	(1.8%)
23	D5 Com. Wat. Ht.	$713	$754	$41	5.8%
24	E1.1 Eng. St. Ltg.	$957	$979	$22	2.3%
25	R7 Greenhs. Ltg.	$408	$420	$12	3.0%
26	R8 Space Cond.	$8,602	$8,733	$131	1.5%
27	Total Secondary	$1,267,121	$1,276,193	$9,072	0.7%
28					
29	**Primary**				
30	D11 Prim. Supply	$976,184	$982,434	$6,250	0.6%
31	D12 Exp. Lrg Cust	$0	$0	$0	-
32	D6.2 Pri. Educ.	$42,647	$43,585	$937	2.2%
33	D8 Int. Primary	$42,973	$43,955	$983	2.3%
34	D10 El.Schools	$2,258	$2,313	$55	2.5%
35	R1.1 Alt. Mtl. Melt.	$4,253	$4,267	$15	0.3%
36	R1.2 El. Pr. Htg.	$34,633	$35,618	$985	2.8%
37	R3 Standby	$11,882	$12,106	$224	1.9%
38	R10 Int. Supply	$69,135	$62,069	($7,066)	(10.2%)
39	Total Primary	$1,183,965	$1,186,347	$2,383	0.2%
40					
41	**Other**				
42	D9 Protective Ltg.	$10,793	$10,033	($760)	(7.0%)
43	E1 Muni Street Ltg	$52,923	$60,901	$7,978	15.1%
44	E2 Traffic Lights	$4,947	$5,103	$156	3.2%
45	Total Other	$68,662	$76,037	$7,375	10.7%
46					
47	**Total All Classes**	$5,319,785	$5,350,333	$30,548	0.6%

Michigan Public Service Commission
DTE Electric Company
Present and Proposed Revenue
by Rate Schedule
FOR ORDER

Case No.: U-20836
ATTACHMENT A

Power Supply Revenues

Line No.	(a) Residential	(b) Power Supply Sales (MWH)	(c) Present Revenue ($000's)	(d) Increase/ (Decrease) ($000's)	(e) Proposed Revenue ($000's)	(f) Capacity Revenue ($000's)	(g) Non-Capacity Revenue ($000's)
1	D1/D1.6 Residential	14,511,593	$1,359,901	($49,521)	$1,310,380	$737,924	$572,456
2	D1-A TOU Pilot	51,441	$4,587	($167)	$4,420	$2,489	$1,931
3	D1-B TOU Pilot	51,664	$4,608	($168)	$4,440	$2,501	$1,940
4	D1.1 Int. Air	346,648	$25,690	($936)	$24,755	$13,940	$10,814
5	D1.2 TOD	184,185	$13,673	($819)	$12,854	$5,293	$7,561
6	D1.7 TOD	116,426	$6,439	($234)	$6,204	$3,494	$2,710
7	D1.8 Dynamic	226,804	$18,337	($668)	$17,670	$9,950	$7,719
8	D1.9 Elec. Vehicle	5,971	$425	($15)	$410	$231	$179
9	D2 Elec. Space Heat	296,604	$21,909	($1,955)	$19,954	$7,726	$12,228
10	D5 Res. Water Ht.	112,137	$5,599	($204)	$5,395	$3,038	$2,357
11	Total Residential	15,903,473	$1,461,169	($54,687)	$1,406,482	$786,586	$619,896
12							
13	**Secondary**						
14	D1.1 Int. Air	5,543	$393	($16)	$377	$182	$196
15	D1.7 TOD	13,399	$631	($25)	$606	$292	$314
16	D1.8 Dynamic	1,168	$86	($3)	$83	$40	$43
17	D1.9 Elec. Vehicle	38	$4	$0	$4	$2	$2
18	D3/D3.5 Gen. Serv.	7,259,840	$598,495	($24,040)	$574,455	$276,420	$298,035
19	D3.1 Unmetered	91,262	$6,264	($252)	$6,012	$2,893	$3,119
20	D3.2 Sec. Educ.	293,992	$21,632	($258)	$21,374	$9,231	$12,143
21	D3.3 Interruptible	72,380	$4,986	($201)	$4,785	$2,303	$2,482
22	D4 Lg. Gen. Serv.	1,987,060	$154,299	($8,927)	$145,372	$63,760	$81,612
23	D5 Com. Wat. Ht.	7,729	$375	($15)	$360	$173	$187
24	E1.1 Eng. St. Ltg.	9,792	$558	($22)	$535	$257	$278
25	R7 Greenhs. Ltg.	4,700	$221	($9)	$212	$102	$110
26	R8 Space Cond.	73,679	$5,311	($214)	$5,097	$2,453	$2,644
27	Total Secondary	9,820,582	$793,255	($33,982)	$759,273	$358,108	$401,165
28							
29	**Primary**						
30	D11 Prim. Supply	12,381,348	$810,314	($23,491)	$786,823	$299,544	$487,279
31	D12 Exp. Lrg Cust	0	$0	$0	$0	$0	$0.00
32	D6.2 Pri. Educ.	349,415	$27,378	($1,865)	$25,513	$11,794	$13,720
33	D8 Int. Primary	589,779	$33,690	($700)	$32,990	$8,428	$24,562
34	D10 El.Schools	16,164	$1,313	($38)	$1,275	$484	$791
35	R1.1 Alt. Mtl. Melt.	60,691	$3,418	($79)	$3,339	$755	$2,584
36	R1.2 El. Pr. Htg.	453,803	$25,048	($592)	$24,456	$5,131	$19,325
37	R3 Standby	147,833	$9,370	($298)	$9,072	$2,651	$6,421
38	R10 Int. Supply	1,281,858	$64,130	($8,542)	$55,588	$0	$55,588
39	Total Primary	15,280,891	$974,662	($35,606)	$939,056	$328,787	$610,269
40							
41	**Other**						
42	D9 Protective Ltg.	34,232	$1,530	($31)	$1,499	$0	$1,499
43	E1 Muni Street Ltg	136,129	$6,085	($125)	$5,960	$0	$5,960
44	E2 Traffic Lights	59,527	$3,864	($79)	$3,785	$1,341	$2,444
45	Total Other	229,889	$11,479	($235)	$11,244	$1,341	$9,903
46							
47	**Total All Classes**	41,234,834	$3,240,566	($124,512)	$3,116,055	$1,474,822	$1,641,233

Michigan Public Service Commission
DTE Electric Company
Present and Proposed Revenue
by Rate Schedule
FOR ORDER

Distribution Revenues

Line No.	(a) Residential	(b) Distribution Sales (MWH)	(c) Present Revenue ($000's)	(d) Increase/ (Decrease) ($000's)	(e) Proposed Revenue ($000's)
1	D1/D1.6 Residential	14,511,593	$1,226,482	$61,713	$1,288,196
2	D1-A TOU Pilot	51,441	$4,218	$217	$4,436
3	D1-B TOU Pilot	51,664	$4,233	$218	$4,451
4	D1.1 Int. Air	346,648	$27,643	$930	$28,573
5	D1.2 TOD	184,185	$14,353	$616	$14,969
6	D1.7 TOD	116,426	$8,632	$312	$8,945
7	D1.8 Dynamic	226,804	$19,169	$937	$20,105
8	D1.9 Elec. Vehicle	5,971	$502	$16	$518
9	D2 Elec. Space Heat	296,604	$24,410	$1,146	$25,556
10	D5 Res. Water Ht.	112,137	$9,226	$301	$9,527
11	Total Residential	15,903,473	$1,338,869	$66,406	$1,405,275
12					
13	**Secondary**				
14	D1.1 Int. Air	5,543	$266	$25	$291
15	D1.7 TOD	13,559	$440	$104	$544
16	D1.8 Dynamic	1,168	$47	$5	$52
17	D1.9 Elec Vehicle	38	$3	$0	$3
18	D3/D3.5 Gen. Serv.	7,567,007	$334,425	$34,354	$368,779
19	D3.1 Unmetered	91,262	$3,791	$224	$4,014
20	D3.2 Sec. Educ.	564,457	$21,885	$3,332	$25,217
21	D3.3 Interruptible	79,432	$3,157	$359	$3,517
22	D4 Lg. Gen. Serv.	2,287,652	$105,637	$4,184	$109,821
23	D5 Com. Wat. Ht.	7,734	$338	$57	$394
24	E1.1 Eng. St. Ltg.	9,792	$399	$44	$443
25	R7 Greenhs. Ltg.	4,700	$186	$21	$208
26	R8 Space Cond.	76,178	$3,292	$345	$3,636
27	Total Secondary	10,708,522	$473,866	$43,054	$516,920
28					
29	**Primary**				
30	D11 Prim. Supply	15,574,024	$165,870	$29,740	$195,610
31	D12 Exp. Lrg Cust	0	$0	$0	$0
32	D6.2 Pri. Educ.	703,871	$15,269	$2,802	$18,071
33	D8 Int. Primary	741,962	$9,283	$1,683	$10,966
34	D10 El.Schools	29,299	$944	$94	$1,038
35	R1.1 Alt. Mtl. Melt.	60,691	$835	$94	$928
36	R1.2 El. Pr. Htg.	462,573	$9,585	$1,577	$11,162
37	R3 Standby	140,815	$2,512	$522	$3,034
38	R10 Int. Supply	1,281,858	$5,005	$1,476	$6,482
39	Total Primary	18,995,093	$209,302.417	$37,989	$247,291
40					
41	**Other**				
42	D9 Protective Ltg.	34,232	$9,263	($728)	$8,534
43	E1 Muni Street Ltg	136,129	$46,838	$8,103	$54,941
44	E2 Traffic Lights	59,527	$1,082	$235	$1,317
45	Total Other	229,889	$57,183	$7,610	$64,793
46					
47	**Total All Classes**	45,836,977	$2,079,220	$155,058	$2,234,279

SECTION C - PART I
COMPANY RULES AND REGULATIONS

C1 CHARACTERISTICS OF SERVICE

C1.1 Character of Service

The Company furnishes alternating current service at a nominal frequency of 60 hertz, and at 120/240 volts which is suitable for lighting and small single-phase power uses. In certain city districts, alternating current is supplied from a Y connected secondary network at 208Y/120 volts. ***In these areas, to ensure safety, the customers must purchase and install service cable furnished by the Company.***

For three-phase General Service installations, the Company will provide 208Y/120 volt, three-phase four-wire service. The Company may at its option provide 240/120 volt, three-phase four-wire Delta connected service or 480Y/277 volt, three-phase four-wire Y connected service for the customer's entire requirements. Where service is supplied at 480Y/277 volts, the customer must furnish any transformation for the supply of his 120/240 volt requirements.

For primary (high voltage) service, the Company offers alternating current service at nominal 4,800, 13,200, 24,000, 41,570 or 120,000 volts, as available, at the option of the Company. Customers must provide their own switchgear and necessary transformation equipment and the installation must be compatible with the Company's system. The operation and maintenance of this switchgear and equipment shall be the responsibility of the customer.

Before purchasing equipment or installing wiring, the customer should secure from the Company the characteristics of electric service available.

C1.2 Continuity of Service

The Company agrees to furnish continuous and adequate service subject to interruption by agreement, or upon advance notice or by accident or other causes not under the reasonable control of the Company, and except where limitations or hours for controlled service are shown in the Schedule of Rates. The Company will not be liable for damages caused by an interruption of service, voltage or frequency variations, single-phase supply to three-phase lines, reversal of phase rotation, or carrier-current frequencies imposed by the Company for system operations or equipment control except such as result from the failure of the Company to exercise reasonable care and skill in furnishing the service. Therefore, the customer should install suitable protective equipment if such occurrences might damage his apparatus.

NOTWITHSTANDING ANY OTHER PROVISION OF THESE RULES, THE COMPANY MAY INTERRUPT, CURTAIL, OR SUSPEND ELECTRIC SERVICE TO ALL OR SOME OF ITS CUSTOMERS BY STATUTE OR IN ACCORDANCE WITH THE PROVISIONS OF THE ORDER APPROVED BY THE MICHIGAN PUBLIC SERVICE COMMISSION ON MAY 23, 1975, AND AS AMENDED ON DECEMBER 11, 1979, IN CASE NO. U-4128, OR SUBSEQUENT ORDERS, AND THE COMPANY SHALL BE UNDER NO LIABILITY WITH RESPECT TO ANY SUCH INTERRUPTION, CURTAILMENT, OR SUSPENSION.

(Continued on Sheet No. C-2.00)

(Continued from Sheet No. C-19.00)

C4 APPLICATION OF RATES (Contd.)

C4.9 Insulation Standards for Electric Heating Rates

To qualify for electric heating rates, any new or conversion residential or commercial customer installing electric heat as the primary heat source shall install insulation to meet the following minimum R value, except where it will be impractical in the judgment of the Company.

	R Insulation
Ceiling (*)	35
Sidewall	11
Floors over unheated areas	19
Basement Walls (if used as living area)	11

Slab construction — 2" rigid foam around perimeter of slab and extending down vertically or under slab horizontally 24".

(*) This does not apply to mobile homes or structures with cathedral ceilings or flat deck roofs.

The above standards may be waived for residential heating customers using supplemental renewable energy heat sources.

C4.10 Alternative Shut-Off Protection Program for Eligible Low-Income and Senior Citizen Customers

A. As used in Section C4.1***0***:

(1) "Eligible customer" means either a Low-income or Senior citizen customer whose arrearage has not accrued as a result of theft or unauthorized use.

(2) "Low-income customer" means a utility customer whose household income is at or below 200% of the Federal Poverty Level (FPL) and provides proof of meeting the eligibility requirement at the time of enrollment.

(3) "Senior citizen customer" means a utility customer who is ***65*** years of age or older and provides proof of meeting the eligibility requirement at the time of enrollment.

B Customers eligible to participate under the Winter Protection Plan, Rules R460.***131*** and R460.***132***, will be required to waive their rights to participate under the Winter Protection Plan in order to participate under the Alternative Shut-off Protection Program for Eligible Low-Income and Senior Citizen Customers, Section C4.11.

(Continued on Sheet No. C-21.00)

C5.2 Customer's Installation

All wiring on the customer's premises shall be installed and maintained in accordance with applicable laws and the rules of the governmental authority having jurisdiction, the National Electrical Code and the rules of the Company.

The use of any part of the Company's distribution system for carrying foreign electric currents or for carrier current transmission or broadcasting is expressly forbidden unless prior written permission has been obtained from the Company.

With the exception of the overhead service entrance cable ***or primary service cable and equipment*** (if required), the Company's service and equipment ends at the meter. ***All equipment and wiring downstream of the meter,*** in addition to the overhead service entrance cable ***or primary service cable and equipment*** (if required), is the responsibility of the customer.

The customer shall provide, at a location approved by the Company and free of expense to the Company, a suitable place for the meter or meters and any other supply, protective or control equipment of the Company which may be required in the delivery of the service.

Any inspection provided by The DTE Electric Company is for the purpose of determining compliance with the technical provisions of Company rules and regulations for service and is, in no way, a guarantee of methods or appliances used by the contractor or the customer, or for the safety of the job.

C5.3 Company Equipment

A **Company Equipment On Customer's Property -** The Company will repair and maintain its own property installed on the premises of the customer. All equipment supplied by the Company shall remain its exclusive property, and the Company shall have the right to remove the same from the premises of the customer at any time after the termination of service for any reason.

Relocation of Company facilities at the request of the customer will be at the customer's expense.

The customer shall be responsible for the safekeeping of the Company's property and shall not permit any person except an authorized Company representative to break any seals upon, or do any work on, any meter or other apparatus of the Company located on the customer's premises***. The customer shall be responsible for ensuring the Company's service line from the Company's distribution system, and the customer's service entrance cable to the meter box, are free from hazards or potential hazards, including vegetation.***

(Continued on Sheet No. C-23.00)

(Continued from Sheet No. C-38.00)

C6 DISTRIBUTION SYSTEMS, LINE EXTENSIONS AND SERVICE CONNECTIONS (Contd.)

C6.4 Underground Service Connections (Contd.)

B Residential Outside Subdivisions and Mobile Home Parks

The applicant shall make a non-refundable contribution in aid of construction for a standard ***3***/0 aluminum service in the amount equal to the product of the trench length in feet multiplied by $3.90. When required, larger services will be provided, and the additional cost will be included in the non-refundable contribution in aid of construction. All new, relocated or upgraded residential service connections will be installed as underground residential service laterals at the customer's expense as set forth in Section C6.4.

C Apartment House Complexes and Condominiums

The applicant shall make a non-refundable contribution in aid of construction in the amount equal to the product of the trench length in feet multiplied by $4.30. ***See C1.1 for service charge differences in secondary network areas.***

No charge will be made for service laterals laid in the same trench with primary or secondary cables. . ***Residential units shall be metered separately in accordance with Standard Contract Rider No. 4.***

When any component of a secondary service involves a residential load, then the main building service utilization voltage shall be the residential voltage (i.e. 240/120 volts or 208Y/120 volts).

(1) Outdoor Pad-Mounted Installation – External Residential Meter Stacks:

(a) The Company will furnish, install, own and maintain the pre-meter portion of the individual service lateral between the distribution facilities and self-contained meter locations.

(b) Where service laterals are installed by the Company as in (a) above, the customer will furnish and install the service lateral in a manner suitable to the Company. The Company will make connection of the customer furnished lateral to its distribution system.

(2) Outdoor Pad-Mounted Installation – Mixed Use Secondary Served Buildings:

(a) When a commercial or industrial building is divided in such a manner as to require several self-contained meter locations (as described above), the owner shall be required to make provisions for a common pre-meter feed either by grouping meters in a manner and location acceptable to the Company, or by installing a Company approved secondary connection cabinet at a Company approved location. The owner shall install one (1) 4" conduit for every 400 amps or part thereof of capacity, based on the rating of the secondary connection cabinet, plus one (1) additional 4" conduit

(Continued on Sheet No. C-39.01)

(Continued from Sheet No. C-38.00)

C6 DISTRIBUTION SYSTEMS, LINE EXTENSIONS AND SERVICE CONNECTIONS (Contd.)

C6.4 Underground Service Connections (Contd.)

for each secondary connection cabinet. The Company will furnish, install in the customers conduits, own and maintain an appropriately sized lateral from the Company's distribution facilities to the agreed upon common point regardless of cable size or number of sets. Service laterals installed in this manner must be coordinated with and approved by the Company prior to installation of the conduit and other equipment. Changes to the configuration, size and number of self-contained meter locations or any proposed load additions to existing secondary connection cabinet installations must be coordinated with the Company. Combining of self-contained meters into one current transformer installation may be accommodated in specific instances where the service lateral cables and the secondary connection cabinet ratings are not exceeded. These combinations and changes must be approved on an individual basis. If the combination/change cannot be made, the service will be provided as indicated in (c) below.

(b) Where service laterals are installed by the Company as in (a) above, the owner or developer will pay to the Company an amount arrived at by multiplying the horizontal length of the service lateral in feet by $10.00.

(c) Where service laterals are required for situations not covered in (a) above, the customer will furnish and install the service lateral in a manner suitable to the Company. The Company will make connection of the customer furnished lateral to its distribution system.

(3)– Indoor Transformer Installation - Residential High-Rise Service

(a) At the Company's option, residential service can be combined with primary services and furnished with Company-owned transformers at remote locations within a primary-metered building. For underground primary (high voltage) services with a residential component, the Company will extend its conduit to the property line. The customer will pay for the underground overhead cost differential for that portion of the off-site facilities that may be required to serve the customer. That part of the service connection on private property inside the property will be owned and maintained by the customer. The design, construction and material for high voltage service shall be acceptable to the Company. In the case of commercial and industrial subdivisions, the costs, requirements, and agreements between the developer or owner and the Company will be set forth in Distribution for Commercial Subdivisions.

(b) The transformers will be installed by the customer. Transformers shall be fed from primary cables furnished, installed, owned and maintained by the customers and will be terminated in the customer-owned primary switching equipment located near the service entrance point of the building. The customer will furnish, install, own and maintain the secondary cable between the transformer secondary terminals and

(Continued on Sheet No. C-39.02)

(Continued from Sheet No. C-39.01)

C6 DISTRIBUTION SYSTEMS, LINE EXTENSIONS AND SERVICE CONNECTIONS (Contd.)

C6.4 Underground Service Connections (Contd.)

(c) ***the tenant meter location. The meters must be grouped and installed in a manner acceptable to the Company. Residential meters must be installed in the same room as the dry-type transformers feeding them. The load at each transformer location must be sufficient to justify the use of one standard Company transformer or multiples thereof. Standard Company transformer sizes and secondary voltages for this application are: 167 kVA single phase 120/240 V and 300 kVA three-pjhase 208Y/120 V. Fuse cabinets and associated equipment will be furnished, owned and maintained by the Company at each transformer location. The fuse cabinents and associated equipment will be paid for and installed by the customer. The transformer locations must be suitable for the installation of dry type transformers and must be accessible for operation and maintenance. The installations must be approved by the Company and must meet code requirements. Suitable access and means shall be provided for transformer, fuse cabinet and associated equipment replacement. The customer shall be responsible for all damages and personal liability arising out of or in connection with the installation of the Company's transformers, fuse cabinets and associated equipment and shall also take reasonable steps to prevent damage to the transformers, fuse cabinets and associated equipment when they are installed on his property.***

The owner will pay the following charges to the Company:

(a) ***$4.30 per trench foot of cable on private property between the primary switching equipment and the property lines nearest the point of connection to the Company distribution system-plus any other Company charges for unusual conditions.***

(b) ***The installed cost of the primary switchgear.***

(c) ***$15 per kVA for all dry type transformers.***

(d) ***The delivered cost of the fuse cabinet and associated equipment.***

(e) ***The developer or owner must provide suitable space and necessary foundations for pad-mounted transformer and the primary switchgear, etc., and he must provide for any trenching, conduit, or manholes acceptable to the Company.***

(4) ***Measurement:***

Service laterals shall be measured from the pole or underground secondary terminal to which the service lateral is connected along the route of the lateral trench or conduit to the point of connection to the customer's facilities. No charge will be made for service laterals laid in the same trench with primary or secondary cables.

(Continued on Sheet No. C-39.03)

(Continued from Sheet No. C-39.02)

C6 DISTRIBUTION SYSTEMS, LINE EXTENSIONS AND SERVICE CONNECTIONS (Contd.)

D Commercial and Industrial

The developer or owner must provide suitable space and provide trenching, backfilling and conduits acceptable to the Company for installation of service cables on his property. ***See C1.1 for service charge differences in secondary network areas.***

(1) Outdoor Pad-Mounted Installation:

(a) The Company will furnish, install, own and maintain the pre-meter portion of the individual service lateral between the distribution facilities and self-contained meter locations.

(b) When a commercial or industrial building is divided in such a manner as to require several self-contained meter locations (as described above), the owner shall be required to make provisions for a common pre-meter feed either by grouping meters in a manner and location acceptable to the Company, or by installing a Company approved secondary connection cabinet at a Company approved location. The owner shall install one (1) 4" conduit for every 400 amps or part thereof of capacity, based on the rating of the secondary connection cabinet, plus one (1) additional 4" conduit for each secondary connection cabinet. The Company will furnish, install in the customers conduits, own and maintain an appropriately sized lateral from the Company's distribution facilities to the agreed upon common point regardless of cable size or number of sets. Service laterals installed in this manner must be coordinated with and approved by the Company prior to installation of the conduit and other equipment.

(Continued on Sheet No. C-40.00)

(Continued from Sheet No. C-39.03)

C6 DISTRIBUTION SYSTEMS, LINE EXTENSIONS AND SERVICE CONNECTIONS (Contd.)

C6.4 Underground Service Connections (Contd.)

Changes to the configuration, size and number of self-contained meter locations or any proposed load additions to existing secondary connection cabinet installations must be coordinated with the Company. Combining of self-contained meters into one current transformer installation may be accommodated in specific instances where the service lateral cables and the secondary connection cabinet ratings are not exceeded. These combinations and changes must be approved on an individual basis. If the combination/change cannot be made, the service will be provided as indicated in (d) below.

(c) Where service laterals are installed by the Company as in (a) and (b) above, the owner or developer will pay to the Company an amount arrived at by multiplying the horizontal length of the service lateral in feet by $10.00.

(d) Where service laterals are required for situations not covered in (a) and (b) above, the customer will furnish and install the service lateral in a manner suitable to the Company. The Company will make connection of the customer furnished lateral to its distribution system.

(Continued on Sheet No. C-41.00)

(Continued from Sheet No. C-40.00)

C6 DISTRIBUTION SYSTEMS, LINE EXTENSIONS AND SERVICE CONNECTIONS (Contd.)

C6.4 Underground Service Connections (Contd.)

(*2*) Metered Primary Voltage:

For underground primary (high voltage) services, the Company will extend its conduit to the property line. The customer will pay for the underground overhead cost differential for that portion of the off-site facilities that may be required to serve the customer. That part of the service connection on private property inside the property line will be owned and maintained by the customer. The design, construction and material for high voltage service shall be acceptable to the Company. In the case of commercial and industrial subdivisions, the costs, requirements, and agreements between the developer or owner and the Company will be set forth in Distribution for Commercial Subdivisions.

Subtransmission underground cables feeding Company-owned substations on private property will be furnished and maintained by the Company. The customer will provide trenching and install and maintain the conduit and manholes for these cables.

(Continued on Sheet No. C-42.00)

(Continued from Sheet No. C-41.00)

C6 DISTRIBUTION SYSTEMS, LINE EXTENSIONS AND SERVICE CONNECTIONS (Contd.)

C6.4 Underground Service Connections (Contd.)

(***3***) Measurement:

Service laterals shall be measured from the pole or underground secondary terminal to which the service lateral is connected along the route of the lateral trench or conduit to the point of connection to the customer's facilities. No charge will be made for service laterals laid in the same trench with primary or secondary cables.

C6.5 Miscellaneous Customer Requests

A Temporary Service

(1) The Company will furnish temporary service including a line extension, service connection and a transformer, as required. The applicant for the service shall pay the total cost including overheads of furnishing, installing and removing such temporary service equipment in excess of any salvage realized, in addition to charges for electric service rendered. The charges for electric service will be billed to the applicant at the applicable metered rate. When the applicant requires the installation of a transformer, the monthly charge for electric service render will not be less than the following:

(a) 48¢ per kVA of installed transformer capacity for the first 10kVA.

(b) 12¢ per kVA of installed transformer capacity in excess of 10kVA.

(2) The contract is an open order, terminable on three days written notice by either the applicant or the Company.

(3) When an unauthorized connection has been made which provides unmetered service to the customer, the Company shall charge the total cost including overheads as stated above for the "Temporary Service Connection," plus an amount to cover the Company's estimation of kilowatthour usage at the applicable rate.

B Moving of Buildings or Equipment

(1) When the Company is requested to assist in the moving of buildings or equipment through, under or over the Company's lines, the Company will require the mover to pay, in advance of providing such assistance, the estimated cost including direct costs and applicable overhead costs. The amount of the contribution required will be based upon the Company's estimate of the probable cost, but in no event will the required contribution be less than one crew hour. Upon completion of moving assistance, the Company will determine actual costs and will bill or credit the mover according to the difference between actual costs and

(Continued on Sheet No. C-43.00)

M.P.S.C. No. 1 - Electric ______________ Revised Sheet No. C-62.00
DTE Electric Company Cancels ______________ Revised Sheet No. C-62.00
(Final Order Case No. U-20836)

(Continued from Sheet No. C-61.00)

C8 SURCHARGES AND CREDITS APPLICABLE TO POWER SUPPLY SERVICE

C8.1 Power Supply Cost Recovery (PSCR) Clause

A This Power Supply Cost Recovery Clause permits the monthly adjustment of rates for power supply to allow recovery of the booked costs of fuel and purchased and net interchanged power transactions incurred under reasonable and prudent policies and practices in accordance with 1982 PA 304. All rates for electric service, unless otherwise provided in the applicable rate schedule, shall include a Power Supply Cost Recovery factor.

B The Power Supply Cost Recovery factor is that element of the rates to be charged for electric service to reflect power supply costs incurred by the company and made pursuant to the Power Supply Cost Recovery Clause.

C Effective __________***, 2022*** the Power Supply Cost Recovery Factor shall consist of an increase or decrease of ***0.010731*** mills per kWh for each full .01 mill increase or decrease in the projected average booked cost of fuel burned for electric generation and purchased and net interchange power incurred above or below a base of 31.26 mills per kWh. Average booked cost of fuel burned and purchased and net interchange power shall be equal to the booked costs in that period divided by that period's net system kWh requirements. Net system kWh requirements shall be the sum of the net kWh generation and net kWh purchased and interchange power.

The following factor(s) were applied to bills rendered during the billing months as indicated below for the calendar years 2020 and 2021.

	2020		**2021**	
Billing Month	**Maximum Authorized Factor ¢/kWh**	**Actual Factor Billed ¢/kWh**	**Maximum Authorized Factor ¢/kWh**	**Actual Factor Billed ¢/kWh**
January	0.166	0.156	0.322	0.322
February	0.166	0.156	0.322	0.322
March	0.166	0.156	0.322	0.322
April	0.166	0.156	0.322	0.322
May	0.166	0.156	0.322	0.322
June	0.166	(0.311)	0.322	0.322
July	0.166	(0.311)	0.322	0.322
August	0.166	(0.311)	0.322	0.322
September	0.166	0.166	0.322	0.322
October	0.166	0.166	0.322	0.322
November	0.166	0.166	0.322	0.322
December	0.166	0.166	0.322	0.322

The Company will file a revised Sheet No. C-62.00 monthly, or as necessary, to reflect the factor to be billed the following month.

(Continued on Sheet No. C-63.00)

Issued ________________
M. Bruzzano
Vice President
Corporate Strategy & Regulatory Affairs

Detroit, Michigan

Effective for service rendered on
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in Case No. U-20836

(Continued from Sheet No. C-64.00)

C8 SURCHARGES AND CREDITS APPLICABLE TO POWER SUPPLY SERVICE (Contd.)

C8.5 SURCHARGES AND CREDITS APPLICABLE TO POWER SUPPLY SERVICE: Summary of surcharges and credits including PSCR, pursuant to sub-rules C8.1, C8.4 of this rule. (Cents per kilowatthour or percent of base bill unless otherwise noted).

	PSCR (¢/kWh)	Total Power Supply Surcharges (excludes REPS) (¢/kWh)	REPS (*1*)
Residential			
D1 Residential	0.322	0.322	See C8.4
D1.1 Int. Space Conditioning	0.322	0.322	See C8.4
D1.2 Time-of-Day	0.322	0.322	See C8.4
D1.6 Special Low Income Pilot	0.322	0.322	See C8.4
D1.7 Geomthermal Time-of-Day	0.322	0.322	See C8.4
D1.8 Dynamic Peak Pricing	0.322	0.322	See C8.4
D1.9 Electric Vehicle	0.322	0.322	See C8.4
D2 Space Heating	0.322	0.322	See C8.4
D1.7 Geomthermal Time-of-Day	0.322	0.322	See C8.4
D1.8 Dynamic Peak Pricing	0.322	0.322	See C8.4
D1.9 Electric Vehicle	0.322	0.322	See C8.4
D1.11 Standard TOU	***0.322***	***0.322***	***See C8.4***
D2 Space Heating	0.322	0.322	See C8.4
D5 Water Heating	0.322	0.322	See C8.4
D9 Outdoor Lighting	0.322	0.322	See C8.4
Commercial			
D1.1 Int. Space Conditioning	0.322	0.322	See C8.4
D1.7 Geomthermal Time-of-Day	0.322	0.322	See C8.4
D1.8 Dynamic Peak Pricing	0.322	0.322	See C8.4
D1.9 Electric Vehicle	0.322	0.322	See C8.4
D3 General Service	0.322	0.322	See C8.4
D3.1 Unmetered	0.322	0.322	See C8.4
D3.2 Educ. Inst.	0.322	0.322	See C8.4
D3.3 Interruptible	0.322	0.322	See C8.4
D3.5 Charging	***0.322***	***.0322***	***See C8.4***
D4 Large General Service	0.322	0.322	See C8.4
D5 Water Heating	0.322	0.322	See C8.4
D9 Outdoor Lighting	0.322	0.322	See C8.4
R3 Standby (Secondary)	0.322	0.322	See C8.4
R7 Greenhouse Lighting	0.322	0.322	See C8.4
R8 Space Conditioning	0.322	0.322	See C8.4
Industrial			
D6.2 Educ. Inst.	0.322	0.322	See C8.4
D8 Interruptible Primary	0.322	0.322	See C8.4
D10 Schools	0.322	0.322	See C8.4
D11 Primary Supply	0.322	0.322	See C8.4
D12 Large Low Peak	***0.322***	***0.322***	***See C8.4***
R1.1 Metal Melting	0.322	0.322	See C8.4
R1.2 Electric Process Heating	0.322	0.322	See C8.4
R3 Standby (Primary)	0.322	0.322	See C8.4
R10 Interruptible Supply	NA	NA	See C8.4
Governmental			
E1 Streetlighting	0.322	0.322	See C8.4
E1.1 Energy Only	0.322	0.322	See C8.4
E2 Traffic Lights	0.322	0.322	See C8.4
Electric Choice			
EC2 Retail Access	NA		NA

(Continued on Sheet No. C-66.00)

(Continued from Sheet No. C-65.00)

C9 SURCHARGES AND CREDITS APPLICABLE TO DELIVERY SERVICE

C9.1 Nuclear Surcharge (NS)

On January 1987 MPSC Order authorized the establishment of an external trust fund to finance the decommissioning of Fermi 2 Power Plant when its operating license expires. The Order approves a decommissioning surcharge on customer bills under which the funds are collected. Pursuant to Commission Order U-10102 dated January 21, 1994, a revised surcharge became effective with service rendered on and after January 22, 1994. In the same order, the Commission authorized the establishment of an external fund to finance the disposal of low-level radioactive waste during the operating life of Fermi 2 Power Plant. Pursuant to an order in Case No. U-14399, costs associated with site security and radiation protection services were removed from base rates and transferred to the Nuclear Surcharge. Pursuant to Commission Order U-16472 dated October 20, 2011, a revised surcharge became effective with service rendered on and after October 29, 2011 Pursuant to Commission Order in Case No. U-17767 a revised surcharge became effective with service rendered on and after December 17, 2015**.** Pursuant to Commission Order in Case No. U-18255 a revised surcharge became effective with service rendered on and after April 18, 2018**.** Pursuant to Commission Order in Case No. U-20162 a revised surcharge became effective with service rendered on and afer May 9, 2019**.** Pursuant to Commission Order in Case No. U-20561 a revised surcharge became effective with service rendered on and afer May 15, 2020. ***Pursuant to Commission Order in Case No. U-20836 a revised surcharge became effective with service rendered on and after __________,2022.***

C9.2 HOLD FOR FUTURE USE

C9.3 HOLD FOR FUTURE USE

C9.4 HOLD FOR FUTURE USE

Continued on Sheet No. C-67.00)

M.P.S.C. No. 1 - Electric ______________ Revised Sheet No. C-70.00
DTE Electric Company Cancels ______________ Revised Sheet No. C-70.00
(Final Order Case No. U-20836)

(Continued from Sheet No. C-69.00)

C9 SURCHARGES AND CREDITS APPLICABLE TO DELIVERY SERVICE: (Contd.)

SURCHARGES AND CREDITS APPLICABLE TO DELIVERY SERVICE: (Contd.)

C9.8 Summary of Surcharges and Credits: Summary of surcharges and credits, pursuant to sub-rules C9.1, C9.2, C9.6, C9.7.9, C9.7.10, C9.7.11, C9.7.12 and C9.7.13. Cents per kilowatthour or percent of base bill, unless otherwise noted.

	NS ¢/kWh	EWRS ¢/kWh	Total Delivery Surcharges ¢/kWh	LIEAF Factor $/Billing Meter
Residential				
D1 Residential	0.0852	0.5076	0.5928	$0.87
D1.1 Int. Space Conditioning	0.0852	0.5076	0.5928	N/A
D1.2 Time of Day	0.0852	0.5076	0.5928	$0.87
D1.6 Special Low Income Pilot	0.0852	0.5076	0.5928	$0.87
D1.7 Geothermal Time-of-Day	0.0852	0.5076	0.5928	N/A
D1.8 Dynamic Peak Pricing	0.0852	0.5076	0.5928	$0.87
D1.9 Electric Vehicle	0.0852	0.5076	0.5928	N/A
D1.11 Standard TOU	***0.0852***	***0.5076***	***0.5928***	***$0.87***
D2 Space Heating	0.0852	0.5076	0.5928	$0.87
D5 Wtr Htg	0.0852	0.5076	0.5928	N/A
D9 Outdoor Lighting	0.0852	0.5076	0.5928	N/A
Commercial				
D1.1 Int. Space Conditioning	0.0852	See C9.6		$0.87
D1.7 Geothermal Time –of- day	0.0852	See C9.6		$0.87
D1.8 Dynamic Peak Pricing	0.0852	See C9.6		$0.87
D1.9 Electric Vehicle	0.0852	See C9.6		$0.87
D3 General Service	0.0852	See C9.6		$0.87
D3.1 Unmetered	0.0852	See C9.6		N/A
D3.2 Educ. Inst.	0.0852	See C9.6		$0.87
D3.3 Interruptible	0.0852	See C9.6		$0.87
D3.5 Charging	***0.0852***	***See C9.6***		***$0.87***
D4 Large General Service	0.0852	See C9.6		$0.87
D5 Wtr Htg	0.0852	See C9.6		$0.87
D9 Outdoor Lighting	0.0852	See C9.6		N/A
R3 Standby Secondary	0.0852	See C9.6		$0.87
R7 Greenhouse Lighting	0.0852	See C9.6		$0.87
R8 Space Conditioning	0.0852	See C9.6		$0.87
Industrial				
D6.2 Educ. Inst.	0.0852	See C9.6		$0.87
D8 Interruptible Primary	0.0852	See C9.6		$0.87
D10 Schools	0.0852	See C9.6		$0.87
D11 Primary Supply	0.0852	See C9.6		$0.87
D12 Large Low Peak	***0.0852***	***See C9.6***		***$0.87***
R1.1 Metal Melting	0.0852	See C9.6		$0.87
R1.2 Electric Process Heating	0.0852	See C9.6		$0.87
R3 Standby Primary	0.0852	See C9.6		$0.87
R10 Interruptible Supply	0.0852	See C9.6		$0.87

(Continued on Sheet No. C-71.00)

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M. Bruzzano
Vice President
Corporate Strategy & Regulatory Affairs

Detroit, Michigan

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M.P.S.C. No. 1 - Electric ______________ Revised Sheet No. C-71.00
DTE Electric Company Cancels ______________ Revised Sheet No. C-71.00
(Final Order Case No. U-20836)

(Continued from Sheet No. C-70.00)

C9 SURCHARGES AND CREDITS APPLICABLE TO DELIVERY SERVICE: (Contd.)

C9.8 Summary of Surcharges and Credits (Contd.):

	NS ¢/kWh	EWRS ¢/kWh	LIEAF Factor $/Billing Meter
Governmental			
E1 Streetlighting Option I	0.08*52*	See C9.6	N/A
E1 Streetlighting Option II & III	0.08*52*	See C9.6	N/A
E1.1 Energy Only	0.08*52*	See C9.6	$0.87
E2 Traffic Lights	0.08*52*	See C9.6	N/A
Electric Choice			
EC2 Residential	0.08*52*	See C9.6	$0.87 See C9.7.9
EC2 D1.1 Int. Space Conditioning	0.08*52*	See C9.6	$0.87
EC2 D1.7 Geothermal Time of Day	0.08*52*	See C9.6	$0.87
EC2 D1.9 Electric Service	0.08*52*	See C9.6	$0.87
EC2 D3 General Service	0.08*52*	See C9.6	$0.87
EC2 D3.2 Educ. Inst.	0.08*52*	See C9.6	$0.87
EC2 D3.3 Interruptible	0.08*52*	See C9.6	$0.87
EC2 D4 Large General Service	0.08*52*	See C9.6	$0.87
EC2 D5 Water Heating	0.08*52*	See C9.6	$0.87
EC2 R7 Greenhouse Ltg	0.08*52*	See C9.6	$0.87
EC2 R8 Space Conditioning	0.08*52*	See C9.6	$0.87
EC2 D6.2 Educ. Inst.	0.08*52*	See C9.6	$0.87
EC2 D8 Int. Primary	0.08*52*	See C9.6	$0.87
EC2 D10 Schools	0.08*52*	See C9.6	$0.87
EC2 D11 Primary Supply	0.08*52*	See C9.6	$0.87
EC2 R1.1 Metal Melting	0.08*52*	See C9.6	$0.87
EC2 R1.2 Elec. Proc. Htg	0.08*52*	See C9.6	$0.87
EC2 R10 Int. Supply	0.08*52*	See C9.6	$0.87

(Continued on Sheet No. C-72.00)

Issued ________________
M. Bruzzano
Vice President
Corporate Strategy & Regulatory Affairs

Detroit, Michigan

Effective for service rendered on
and after _____________, 2022

Issued under authority of the
Michigan Public Service Commission
dated ________________
in Case No. U-20836

RATE SCHEDULE NO. D1 **RESIDENTIAL SERVICE RATE - *BASE***

AVAILABILITY OF SERVICE: Available to customers desiring service for all residential purposes through one meter to a single or double occupancy dwelling unit including farm dwellings. A dwelling unit consists of a kitchen, bathroom, and heating facilities connected on a permanent basis. Service to appurtenant buildings may be taken on the same meter.

This rate is not available for common areas of separately metered apartments and condominium complexes, nor to a separate meter which serves a garage, boat well or other non-dwelling applications.

HOURS OF SERVICE: 24 hours.

CURRENT, PHASE AND VOLTAGE: Alternating current, single-phase, nominally at 120/240 volts, three-wire. Where available, and the demand justifies, three-phase four-wire, Y connected service may be had at 208Y/120 volts nominally.

In certain city districts, alternating current is supplied from a Y connected secondary network from which 120/208 volts, three-wire service may be taken.

RATE PER DAY:

Full Service Customers:

Power Supply Charges:

Capacity Energy Charges:	***4.405¢*** per kWh for the first 17 kWh per day
	6.347¢ per kWh for excess over 17 kWh per day
Non-Capacity Energy Charge*:*	***3.945¢*** per kWh for all kWh

Delivery Charges:

Service Charge:	$***8***.50 per month
Distribution Charge:	***6.879¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8. Applies only to actual consumption and not to the minimum charge.

Retail Access Service Customers:

Power Supply Charges for Retail Access Customers taking Utility Capacity service for DTE:

Capacity Energy Charges:	***4.405¢*** per kWh for the first 17 kWh per day
	6.347¢ per kWh for excess over 17 kWh

Delivery Charges:

Service Charge:	**$*8***.50 per month
Distribution Charge:	***6.879¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Section C9.8. Applies only to actual consumption and not to the minimum charge. Capacity related surcharges and credits applicable to power supply, excluding PSCR, as approved by the Commission. See Sections C8.5.

(Continued on Sheet No. D-2.00)

(Continued from Sheet No. D-1.00)

RATE SCHEDULE NO. D1 (Contd.) **RESIDENTIAL SERVICE RATE - *BASE***

BILLING FREQUENCY: Based on a nominal 30-day month. See Section C4.5.

MINIMUM CHARGE: The Service Charge plus any applicable per meter per month surcharges.

CONTRACT TERM: Open order, terminable on three days' notice by either party. Where special services are required, the term will be as specified in the applicable contract rider.

LATE PAYMENT CHARGE: See Section C4.8.

INTERRUPTIBLE SPACE-CONDITIONING PROVISION: Rate D1.1 is available on an optional basis.

WATER HEATING SERVICE: Water heating service is available on an optional basis. See Schedule Designation No. D5.

INCOME ASSISTANCE SERVICE PROVISION (RIA): When service is supplied to a Principal Residence Customer, where the household receives a Home Heating Credit (HHC) in the State of Michigan, a credit shall be applied during all billing months. For an income assistance customer to qualify for this credit, the Company shall require annual evidence of the HHC energy draft or warrant. The customer may also qualify for this credit upon confirmation by an authorized State or Federal agency verifying that the customer's total household income does not exceed 150% of the poverty level as published by the United States department of health and human services or if the customer receives any of the following: i) Assistance from a state emergency relief program; ii) Food stamps or iii) Medicaid.

The monthly credit for the residential Income Assistance Service Provision shall be applied as follows:

Delivery Charges: These charges are applicable to Full Service and Retail Open Access customers.
Income Assistance Credit: $(***8***.50) per customer per month

RESIDENTIAL SERVICE SENIOR CITIZEN PROVISION: When service is supplied to a Principal Residence Customer, who is 65 years of age or older and head of household, a credit shall be applied during all billing months. The monthly credit for the Residential Service Senior Citizen Provision shall be applied as follows:

Delivery Charges: These charges are applicable to Full Service and Retail Open Access customers.
Senior Citizen Credit: $(***4.25***) per customer per month

This credit shall not be taken in conjunction with a credit for the Income Assistance Service Provision (RIA).

(Continued on Sheet No. D-2.01)

RATE SCHEDULE NO. D1-A RESIDENTIAL ADVANCED PRICING PILOT A; TIME OF USE I

AVAILABILITY OF SERVICE: This rate will be offered to 65,000 Company selected residential customers currently taking service on Rate Schedule D1 on an "opt-in" basis. Customers who are offered this rate in this manner will be able to choose whether or not to take service pursuant to this Rate Schedule. The number of customers on this rate schedule shall be limited to the first 2,500 customers who affirmatively choose to opt-in, after which additional customers shall be allowed to participate at the Company's discretion. Any customer declining service under this rate or choosing to terminate service under this rate may not reestablish service under this rate.

This rate will also be offered to an additional 5,000 Company selected residential customers currently taking service on Rate Schedule D1 on an "opt-out" basis. Customers who are offered this rate in this manner will receive notice from Company that they have been selected to be on this rate 60 days prior to being switched to this rate. Customers will be informed that if they do not want to take service pursuant to this rate they can inform the Company of this at any time and they will not be placed on this rate. Any Customer choosing to take service pursuant this rate may at any time in the future inform the Company they would like to discontinue service under this rate and revert to their previous rate. Any customer declining service under this rate or choosing to terminate service under rate may not reestablish service under this rate.

HOURS OF SERVICE: 24 hours.

CURRENT, PHASE AND VOLTAGE: Alternating current, single-phase, nominally at 120/240 volts, three-wire.

RATE PER MONTH:

Full Service Customers:

Power Supply Charges:
Capacity Energy Charge: 4.***838*** cents per kWh for all kWh

Non-Capacity Energy Charge (June through September):
5.304¢ per kWh for all On-peak kWh
3.612¢ per kWh for all Off-peak kWh

Non - capacity Energy Charge (October through May):
4.029¢ per kWh for all On-peak kWh
3.612¢ per kWh for all Off-peak kWh

On-Peak Hours: All kWh used between 3:00PM and 7:00PM Monday through Friday.
Off-Peak Hours: All other kWh used.

Delivery Charges:
Service Charge: $***8***.50 per month
Distribution Charge: ***6.537¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

(Continued on Sheet No. D-3.01)

Issued ________________
M. Bruzzano
Vice President
Corporate Strategy & Regulatory Affairs

Detroit, Michigan

Effective for service rendered on
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Issued under authority of the
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dated ________________
in Case No. U-20836

RATE SCHEDULE NO. D1-B RESIDENTIAL ADVANCED PRICING PILOT B; TIME OF USE II

AVAILABILITY OF SERVICE: This rate will be offered to 65,000 Company selected residential customers currently taking service on Rate Schedule D1 on an "opt-in" basis. Customers who are offered this rate in this manner will be able to choose whether or not to take service pursuant to this Rate Schedule. The number of customers on the "opt-in" option of this rate schedule shall be limited to the first 2,500 customers who affirmatively chose to opt-in, after which additional customers shall be allowed to participate at the Company's discretion. Any customer declining service under this rate or choosing to terminate service under this rate may not reestablish service under this rate.

This rate will also be offered to an additional 5,000 Company selected residential customers currently taking service on Rate Schedule D1 on an "opt-out" basis. Customers who are offered this rate in this manner will receive notice from Company that they have been selected to be on this rate 60 days prior to being switched to this rate. Customers will be informed that if they do not want to take service pursuant to this rate they can inform the Company of this at any time and they will not be placed on this rate. Any Customer choosing to take service pursuant this rate may at any time in the future inform the Company they would like to discontinue service under this rate and revert to their previous rate. Any customer declining service under this rate or choosing to terminate service under rate may not reestablish service under this rate.

HOURS OF SERVICE: 24 hours.

CURRENT, PHASE AND VOLTAGE: Alternating current, single-phase, nominally at 120/240 volts, three-wire.

RATE PER MONTH:

Full Service Customers:

Power Supply Charges:

Capacity Energy Charge (June through September):
7.557¢ per kWh for all On-peak kWh
4.595¢ per kWh for all Off-peak kWh

Capacity Energy Charge (October through May):
5.291¢ per kWh for all On-peak kWh
4.595¢ per kWh for all Off-peak kWh

Non-Capacity Energy Charge (June through September):
5.862¢ per kWh for all On-peak kWh
3.564¢ per kWh for all Off-peak kWh

Non - capacity Energy Charge (October through May):
4.105¢ per kWh for all On-peak kWh
3.564¢ per kWh for all Off-peak kWh

On-Peak Hours: All kWh used between 3:00PM and 7:00PM Monday through Friday.
Off-Peak Hours: All other kWh used.

(Continued on Sheet No. D-3.03)

(Continued from Sheet No. D-3.02)

RATE SCHEDULE NO. D1-B (Contd.) **RESIDENTIAL ADVANCED PRICING PILOT B; TIME OF USE II**

Delivery Charges:

Service Charge:	$***8***.50 per month
Distribution Charge:	***6.357¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

LATE PAYMENT CHARGE: See Section C4.8.

MINIMUM CHARGE: The Service Charge plus any applicable per meter per month surcharges.

CONTRACT TERM: "Opt-in" customers shall contract to remain on this rate for at least three billing cycles terminable on three days' notice after the initial three billing cycles by either party. "Opt-out" customers are open order, terminable on three days' notice by either party. If the Michigan Public Service Commission orders full implementation of any advanced rate structure for residential customers this pilot will terminate, unless it is approved by the Commission in the aforementioned order.

WATER HEATING SERVICE: Water heating service is available on an optional basis.

INTERRUPTIBLE SPACE CONDITIONING PROVISION: Rate D1.1 is available on an optional basis.

RATE SCHEDULE NO. D1.1 **INTERRUPTIBLE SPACE-CONDITIONING SERVICE RATE**

AVAILABILITY OF SERVICE: Available on an optional basis to Residential and Commercial customers desiring separately metered interruptible service for central air conditioning and/or central heat pump use. Customers who have more than one heat pump and/or air-conditioning unit which serves their business or home, will not be permitted to have only a portion of their load on the rate, all units will be interrupted upon the signal from the Company. Installations must conform with the Company's specifications. This rate is not available to commercial customers being billed on a demand rate.

HOURS OF SERVICE: 24 hours.

HOURS OF INTERRUPTION: Central air-conditioning and/or heat pump units only will be turned off by the Company by remote control on selected days for intervals of no longer than thirty minutes in any hour for no more than eight hours in any one day. Company interruptions may include interruptions for, but not limited to maintaining system integrity, making an emergency purchase, economic reasons, or when available system generation is insufficient to meet anticipated system load.

CURRENT, PHASE AND VOLTAGE: Alternating current, single-phase, nominally at 120/240 volts, three-wire. Where available, and the demand justifies, three-phase four wire, Y connected service may be had at 208Y/120 volts nominally.

In certain city districts, alternating current is supplied from a Y connected secondary network from which 120/208 volts, three-wire service may be taken.

RATE PER MONTH: For separately metered space-conditioning service.

Full Service Customers:

Residential Power Supply Charges:

Capacity Energy Charge (June through October):	***4.202¢*** per kWh for all kWh
Capacity Energy Charge (November through May):	***1.042¢*** per kWh for all kWh
Non-Capacity Energy Charge:	***3.120¢*** per kWh for all kWh

Residential Delivery Charges:

Service Charge (June through October):	$1.95 per month
Distribution Charge (Year-round):	***6.879¢*** per kWh for all kWh

Commercial Power Supply Charges:

Capacity Energy Charge (June through October):	***3.936¢*** per kWh for all kWh
Capacity Energy Charge (November through May):	***1.764¢*** per kWh for all kWh
Non-Capacity Energy Charge:	***3.531¢*** per kWh for all kWh

Commercial Delivery Charges:

Service Charge (June through October):	$1.95 per month
Distribution Charge (Year-round):	***4.320¢*** per kWh for all kWh

(Continued on Sheet No. D-5.00)

(Continued from Sheet No. D-4.00)

RATE SCHEDULE NO. D1.1 (Contd.) **INTERRUPTIBLE SPACE-CONDITIONING SERVICE RATE**

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8. Applies only to actual consumption and not to the minimum charge.

Retail Access Service Customers:

Residential Power Supply Charges for Retail Access Customers taking Utility Capacity Service from DTE***:***

Capacity Energy Charge (June through October):	***4.202¢*** per kWh for all kWh
Capacity Energy Charge (November through May***):***	***1.042¢*** per kWh for all kWh

Residential Delivery Charges:

Capacity Service Charge June through October):	$1.95 per month
Capacity Distribution Charge (Year-round):	***3.120¢*** per kWh for all kWh

Commerical Power Supply Charges for Retail Access Customers taking Utility Capacity Service from DTE:

Capacity Energy Charge (June through October):	***3.936¢*** per kWh for all kWh
Capacity Energy Charge (November through May):	***1.764¢*** per kWh for all kWh

Commercial Delivery Charges:

Service Charge June through October):	$1.95 per month
Distribution Charge (Year-round):	***3.531¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Section C9.8. Applies only to actual consumption and not to the minimum charge. Capacity related surcharges and credits applicable to power supply, excluding PSCR, as approved by the Commission. See Section C8.5.

LATE PAYMENT CHARGE: See Section C4.8.

MINIMUM CHARGE: The Service Charge plus any applicable per meter per month surcharges.

CONTRACT TERM: Open order, terminable on three days' written notice by either party. Where special services are required, the term will be as specified in the applicable contract rider.

RATE SCHEDULE NO. D1.2 **RESIDENTIAL SERVICE RATE – *ENHANCED TOU***

AVAILABILITY OF SERVICE: Available on an optional basis to customers who desire time of day service for their residential dwelling. Customers who select this rate must qualify for the Residential Service Rate D1.

HOURS OF SERVICE: 24 hours.

CURRENT, PHASE AND VOLTAGE: Alternating current, single-phase, nominally at 120/240 volts, three-wire.

RATE PER MONTH:

Full Service Customers:

Power Supply Charges:
Capacity Energy Charge (June through October):
11.033¢ per kWh for all On-peak kWh
0.991¢ per kWh for all Off-peak kWh

Capacity Energy Charge (November through May):
8.682¢ per kWh for all On-peak kWh
0.792¢ per kWh for all Off-peak kWh

On-Peak Hours: All kWh used between 1100 and 1900 hours Monday through Friday.
Off-Peak Hours: All other kWh used.

Non-Capacity Energy Charge***: 4.105¢*** per kWh for all kWh

Delivery Charges:
Service Charge: $***8***.50 per month
Distribution Charge: ***6.879¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

Retail Access Service Customers:

Power Supply Charges for Retail Access Customers taking Utility Capacity Service from DTE:
Capacity Energy Charge (June through October):
11.033¢ per kWh for all On-peak kWh
0.991¢ per kWh for all Off-peak kWh

Capacity Energy Charge (November through May):
8.682¢ per kWh for all On-peak kWh
0.792¢ per kWh for all Off-peak kWh

On-Peak Hours: all kWh used between 1100 and 1900 hours Monday through Friday.
Off-Peak Hours: all other kWh used.

(Continued on Sheet No. D-7.00)

(Continued from Sheet No. D-6.00)

RATE SCHEDULE NO. D1.2 (Contd.) **RESIDENTIAL SERVICE RATE – *ENHANCED TOU***

Delivery Charges:

Service Charge: $***8***.50 per month
Distribution Charge: ***6.879¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Section C9.8. Capacity related surcharges and credits applicable to power supply, excluding PSCR, as approved by the Commission. See Section C5.8.

LATE PAYMENT CHARGE: See Section C4.8.

MINIMUM CHARGE: The Service Charge plus any applicable per meter per month surcharges.

CONTRACT TERM: Commencing upon installation of the Time-of-Day meter, service will be provided for twelve continuous months thereafter, with termination upon mutual consent of the Company and the customer.

WATER HEATING SERVICE: Water heating service is available on an optional basis.

INTERRUPTIBLE SPACE CONDITIONING PROVISION: Rate D1.1 is available on an optional basis.

INCOME ASSISTANCE SERVICE PROVISION (RIA): When service is supplied to a Principal Residence Customer, where the household receives a Home Heating Credit (HHC) in the State of Michigan, a credit shall be applied during all billing months. For an income assistance customer to qualify for this credit, the Company shall require annual evidence of the HHC energy draft or warrant. The customer may also qualify for this credit upon confirmation by an authorized State or Federal agency verifying that the customer's total household income does not exceed 150% of the poverty level as published by the United States department of health and human services or if the customer receives any of the following: i) Assistance from a ***state emergency relief program; ii) Food stamps or iii)*** Medicaid.

The monthly credit for the residential Income Assistance Service Provision shall be applied as follows:

Delivery Charges: These charges are applicable to Full Service and Retail Open Access customers.
Income Assistance Credit: $(***8***.50) per customer per month

RATE SCHEDULE NO. D1.6 **RESIDENTIAL SERVICE *RATE* - SPECIAL LOW INCOME PILOT**

AVAILABILITY OF SERVICE: Customers who select this pilot rate must qualify for the Residential Service rate D1. To qualify for this pilot rate a customer must also provide annual evidence of receiving a Home Heating Credit (HHC) energy draft or warrant, or must provide confirmation by an authorized State or Federal agency verifying that the customer's total household income does not exceed 150% of the poverty level as published by the United States department of health and human services or if the customer receives any of the following: i) Assistance from a state emergency relief program; ii) Food stamps or iii) Medicaid**.** Service under this rate shall be limited to an annual average of 32,000 customers.

HOURS OF SERVICE: 24 hours.

CURRENT, PHASE AND VOLTAGE: Alternating current, single-phase, nominally at 120/240 volts, three-wire. Where available, and the demand justifies, three-phase four-wire, Y connected service may be had at 208Y/120 volts nominally.

In certain city districts, alternating current is supplied from a Y connected secondary network from which 120/208 volts, three-wire service may be taken.

RATE PER DAY:

Full Service Customers:

Power Supply Charges:

Capacity Energy Charges: ***4.405¢*** per kWh for the first 17 kWh per day
6.347¢ per kWh for excess over 17 kWh per day

Non-Capacity Energy Charge***:*** ***3.945¢*** per kWh for all kWh per day

Delivery Charges:

Service Charge: $***8***.50 per month
Distribution Charge: ***6.879¢*** per kWh for all kWh
Special Low Income Discount: ($40.00) per month

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8. Applies only to actual consumption and not to the minimum charge.

Retail Access Service Customers:

Residential Power Supply Charges for Retail access Customers taking Utility Capacity Service from DTE:

Capacity Energy Charges***:*** ***4.405¢*** per kWh for first 17 kWh per day
6.347¢ per kWh for excess over 17 kWh per day

(Continued on Sheet No. D-12.02)

Issued ________________
M. Bruzzano
Vice President
Corporate Strategy & Regulatory Affairs

Detroit, Michigan

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(Continued from Sheet No. D-12.01)

RATE SCHEDULE NO. D1.6 (Contd.)RESIDENTIAL SERVICE *RATE* - SPECIAL LOW INCOME PILOT

Delivery Charges:

Service Charge:	$***8***.50 per month
Distribution Charge:	***6.879¢*** per kWh for all kWh
Special Low Income Discount:	($40.00) per month

Surcharges and Credits: As approved by the Commission. See Section C9.8. Capacity related surcharges and credits applicable to power supply, excluding PSCR, as approved by the Commission. See Section C8.5.

BILLING FREQUENCY: Based on a nominal 30-day month. See Section C4.5.

CONTRACT TERM: Open order, terminable on three days' notice by either party. If a customer fails to make the required payment on time for three consecutive billing periods that customer shall automatically be removed from this rate. Where special services are required, the term will be as specified in the applicable contract rider.

LATE PAYMENT CHARGE: See Section C4.8.

INTERRUPTIBLE SPACE-CONDITIONING PROVISION: Rate D1.1 is available on an optional basis.

WATER HEATING SERVICE: Water heating service is available on an optional basis. See Schedule Designation No. D5.

RATE SCHEDULE NO. D1.7 **GEOTHERMAL TIME-OF-DAY RATE**

AVAILABILITY OF SERVICE: Available on an optional basis to residential customers desiring separately metered service for approved geothermal space conditioning and/or water heating. To qualify for the rate the water heater must be for sanitary purposes with the tank size, design and method of installation approved by the company. The space conditioning equipment must be permanently installed.

HOURS OF SERVICE: 24 Hours

CURRENT, PHASE AND VOLTAGE: Same as D1 and D3 Rates

CONTRACT TERM: The customer shall contract to remain on this rate for at least 12 months terminable on three days notice after the initial 12 months by either party. Where special services are required, the term will be specified on the applicable contract rider.

INSULATION STANDARDS FOR ELECTRIC HEATING: See Section C4.9.

MINIMUM CHARGE: The Service Charge plus any applicable per meter per month surcharges.

LATE PAYMENT CHARGE: See Section C4.8.

RATE PER DAY:

Full Service Customers:

Residential Power Supply Charges:

Capacit***y*** Energy Charge (June through September):
11.188¢ per kWh for all On-peak kWh
2.149¢ per kWh for all Off-peak kWh

Capacity Energy Charge (October through May):
3.512¢ per kWh for all On-peak kWh
2.261¢ per kWh for all Off-peak kWh

On-Peak Hours: All kWh used between 1100 and 1900 hours Monday through Friday.
Off-Peak Hours: All other kWh used.

Non-Capacity Energy Charge***:*** ***2.328¢*** per kWh for all kWh

Residential Delivery Charges:
Service Charge: 6.70¢ per day
Distribution Charge: ***6.879*** per kWh for all kWh

(Continued on Sheet No. D-13.01)

(Continued from Sheet No. D-13.00)

RATE SCHEDULE NO. D1.7 (Contd.) **GEOTHERMAL TIME-OF-DAY RATE**

Commercial Power Supply Charges:

Capacity Energy Charge (June through September):
3.370¢ per kWh for all On-peak kWh
1.752¢ per kWh for all Off-peak kWh

Capacity Energy Charge (October through May):
2.157¢ per kWh for all On-peak kWh
2.157¢ per kWh for all Off-peak kWh

On-Peak Hours: All kWh used between 1100 and 1900 hours Monday through Friday.
Off-Peak Hours: All other kWh used.

Non-Capacity energy Charge: ***2.346¢*** per kWh for all kWh

Commercial Delivery Charges:

Service Charge: 6.70¢ per day
Distribution Charge: ***3.848¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

Retail Access Service Customers:

Residential Power Supply Charges for Retail Access Customers taking Utility Capacity Service from DTE:

Capacity Energy Charge (June through September):
11.188¢ per kWh for all On-peak kWh
2.149¢ per kWh for all Off-peak kWh

Capacity Energy Charge (October through May):
3.512¢ per kWh for all On-peak kWh
2.261¢ per kWh for all Off-peak kWh

On-Peak Hours: All kWh used between 1100 and 1900 hours Monday through Friday.
Off-Peak Hours: All other kWh used.

Residential Delivery Charges:

Service Charge: 6.70¢ per day
Distribution Charge: ***6.879¢*** per kWh for all kWh

Commerical Power Supply Charges for Retail Access Customers taking Utility Capacity Service from DTE:

Capacity Energy Charge (June through September***):***
3.370¢ per kWh for all On-peak kWh
1.752¢ per kWh for all Off-peak kWh

(Continued on Sheet No. D-13.02)

(Continued from Sheet No. D-13.01)

RATE SCHEDULE NO. D1.7 (Contd.) **GEOTHERMAL TIME-OF-DAY RATE**

Capacity Energy Charge (October through May):
2.157¢ per kWh for all On-peak kWh
2.157¢ per kWh for all Off-peak kWh

Commercial Delivery Charges:
Service Charge: 6.70¢ per day
Distribution Charge: ***3.848¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Section C9.8. Capacity related surcharges and credits applicable to power supply, excluding PSCR, as approved by the commission. See Section C5.8.

RATE SCHEDULE NO. D1.8 ***RESIDENTIAL SERVICE RATE* - DYNAMIC PEAK PRICING**
GENERAL SERVICE RATE – DYNAMIC PEAK PRICING

AVAILABILITY OF SERVICE: Available on an optional basis to full-service residential and secondary commercial and industrial customers seeking to manage their electric costs by either reducing load during high cost pricing periods or shifting load from high cost pricing periods to lower cost pricing periods. Service under this rate is limited to a residential customers and secondary commercial and industrial customers who have Advanced Metering Infrastructure installed. Service under this rate may not be combined with any other tariff, rider, or separately metered service***, other than Rider 18 (if available)***.

The rate features three price tiers for On-Peak, Mid-Peak, and Off-Peak, as well as Critical Peak prices for days where Critical Hours are announced.

Definitions:

On-Peak Hours:	All kWh used between 3P.M. and 7P.M. Monday through Friday, excluding holidays
Mid-Peak Hours:	All kWh used between 7A.M. and 3P.M., and between 7P.M. and 11P.M., Monday through Friday excluding holidays
Off-Peak Hours:	All kWh used between 11 P.M and 7 A.M. Monday through Friday, and all weekend and holiday hours.
Critical-Peak Hours:	All kWh used during critical hours, which, when announced, will replace the full on-peak time period from 3 P.M. to 7 P.M.

The Company expects to implement Critical Peak pricing for no more than ***56*** hours per year, for evaluation of the tariff based on several factors including but not limited to economics, system demand or capacity deficiency.

Customers will be notified up to 24 hours before, but no less than 6 hours before critical hours are expected to occur. Notification will be made by one or more of the following methods: automated telephone message, text message, e-mail, or presentment on an in-premise display unit furnished by the Company. Receipt of such notice is the responsibility of the participating customer.

Customers who qualify and sign up for this rate agree to participate in evaluation surveys and will remain anonymous on all such surveys.

HOURS OF SERVICE: 24 hours.

CURRENT, PHASE AND VOLTAGE: Alternating current, single-phase, nominally at 120/240 volts, three-wire; or three-phase four-wire, Y connected at 208Y/120 volts; or under certain conditions three-phase four-wire, Y connected at 480Y/277 volts.

In certain city districts, alternating current is supplied from a Y connected secondary network from which 120/208 volt, single-phase three-wire; or 208Y/120 volts, three-phase four wire service may be taken.

(Continued on Sheet No. D-14.01)

(Continued from Sheet No. D-14.01)

RATE SCHEDULE NO. D1.8 (Contd.) ***RESIDENTIAL SERVICE RATE* - DYNAMIC PEAK PRICING**
GENERAL SERVICE RATE – DYNAMIC PEAK PRICING

CHARGES:

Full Service Residential Customers:

Power Supply Charges:

Capacity Energy Charges:	***12.658¢*** per kWh for all On-Peak kWh
	5.486¢ per kWh for all Mid-Peak kWh
	1.184¢ per kWh for all Off-Peak kWh
	$0.91597per kWh for all kWh during Critical Peak Hours
Non-Capacity Energy Charge***:***	***3.403¢*** per kWh for all kWh

Delivery Charges:

Service Charge:	$***8***.50 per month
Distribution Charge:	***6.879¢*** per kWh for all kWh

Full Service Secondary Commercial and Industrial Customers:

Power Supply Charges:

Capacity Energy Charges:	***12.474¢*** per kWh for all On-Peak kWh
	5.092¢ per kWh for all Mid-Peak kWh
	0.787¢ per kWh for all Off-Peak kWh
	$***1.22103***per kWh for all kWh during Critical Peak Hours
Non-Capacity Energy Charge**:**	***3.676¢*** per kWh for all kWh

Delivery Charges:

Service Charge:	$11.25 per month
Distribution Charge:	***4.320¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

MINIMUM CHARGE: The Service Charge plus any applicable per meter per month surcharges.

SCHEDULE OF HOLIDAYS: See Section C11

CONTRACT TERM: The customer shall contract to remain on this rate for at least 12 months terminable on three days' notice after the initial 12 months by either party.

LATE PAYMENT CHARGE: See Section C4.8.

INCOME ASSISTANCE SERVICE PROVISION (RIA)*:* When service is supplied to a Principal Residence Customer, where the household receives a Home Heating Credit (HHC) in the State of Michigan, a credit shall be applied during all billing months. For an income assistance customer to qualify for this credit, the Company shall require annual evidence of the HHC energy draft or warrant. The customer may also qualify for this credit upon

RATE SCHEDULE NO. D1.8 (Contd.) ***RESIDENTIAL SERVICE RATE -*** DYNAMIC PEAK PRICING

GENERAL SERVICE RATE – DYNAMIC PEAK PRICING

INCOME ASSISTANCE SERVICE PROVISION (RIA)(contd):

confirmation by an authorized State or Federal agency verifying that the customer's total household income does not exceed 150% of the poverty level as published by the United States department of health and human services or if the customer receives any of the following: i) Assistance from a state emergency relief program; ii) Food stamps or iii) Medicaid.

The monthly credit for the residential Income Assistance Service Provision shall be applied as follows:

Delivery Charges: These charges are applicable to Full Service and Retail Open Access customers.
Income Assistance Credit: $(***8***.50) per customer per month

RATE SCHEDULE NO. D1.9 **ELECTRIC VEHICLE RATE**

AVAILABILITY OF SERVICE: Available on an optional basis to residential and commercial customers desiring separately metered service for the sole purpose of charging licensed electric vehicles. Installations must conform to the Company's specifications. Service under this tariff is limited to 5,000 customers. Service on this rate is limited to electric vehicles that are SAE J1772 compliant, and all vehicles shall be registered and operable on public highways in the State of Michigan to qualify for this rate. Low-speed electric vehicles including golf carts are not eligible to take service under this rate even if licensed to operate on public streets. The customer may be required to provide proof of registration of the electric vehicle to qualify for the program.

HOURS OF SERVICE: 24 Hours

CURRENT, PHASE AND VOLTAGE: Alternating current, single-phase, nominally at 120/240 volts, three wire. In certain city districts, alternating current is supplied from a Y connected secondary network from which 120/208 volts, three-wire service may be taken

CONTRACT TERM: Open order, terminable on three days' notice by either party. Where special services are required, the term will be as specified on the applicable contract rider.

MINIMUM CHARGE: The Service Charge plus any applicable per meter per month surcharges.

LATE PAYMENT CHARGE: See Section C4.8.

OPTION 1: TIME OF DAY PRICING

Full Service Customers:

Power Supply Charges:
Capacity Energy Charge:
9.593¢ per kWh for all On-peak kWh
2.399¢ per kWh for all Off-peak kWh
Non-Capacity Energy Charge:
7.443¢ per kWh for all On-peak kWh
1.860¢ per kWh for all Off-peak kWh
On-Peak Hours: All kWh used between 9 am and 11 pm Monday through Friday.
Off-Peak Hours: All other kWh used.

Delivery Charges:
Service Charge: $1.95 per month
Distribution Charge: ***6.879¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

Retail Access Service Customers:
Power Supply Charges for Retail Access Customers taking Utility Capacity Service from DTE:
Capacity Energy Charge:
9.593¢ per kWh for all On-peak kWh
2.399¢ per kWh for all Off-peak kWh

(Continued on Sheet No. D-14.04)

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Effective for service rendered on
and after _____________, 2022

Issued under authority of the
Michigan Public Service Commission
dated ________________
in Case No. U-20836

(Continued from Sheet No. D-14.03)

RATE SCHEDULE NO. D1.9 (Contd.) **ELECTRIC VEHICLE RATE**

Retail Access Service Cutomer (Contd.):

On-Peak Hours: All kWh used between 9 am and 11 pm Monday through Friday.
Off-Peak Hours: All other kWh used.

Delivery Charges:

Service Charge: $1.95 per month
Distribution Charge: ***6.879¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8. Capacity related surcharges and credits applicable to power supply, excluding PSCR, as approved by the Commission. See C8.5.

OPTION 2: MONTHLY FLAT FEE (Residential only)*:*
Closed to new customers as of May 31, 2019. Existing customers will be moved to a new rate by December 31, 2019.

SPECIAL TERMS AND CONDITIONS:

Service under this rate must be supplied through a separately metered circuit and approved electric vehicle charging equipment. Installations must conform with the Company's specifications.

The Company is exploring additional possible metering options to be offered at the Company's discretion. This includes but is not limited to, collecting data directly from charging stations and/or utilizing technology beyond the general service meter to measure EV usage.

RATE SCHEDULE NO. D1.11 ***RESIDENTIAL SERVICE RATE – STANDARD TOU***

AVAILABILITY OF SERVICE: *This rate will be available for service no later than May 31, 2023. Available to customers desiring service for all residential purposes through one meter to a single or double occupancy dwelling unit including farm dwellings. A dwelling unit consists of a kitchen, bathroom, and heating facilities connected on a permanent basis. Service to appurtenant buildings may be taken on the same meter.*

This rate is not available for common areas of separately metered apartments and condominium complexes, nor to a separate meter which serves a garage, boat well or other non-dwelling applications.

HOURS OF SERVICE: *24 hours.*

CURRENT, PHASE AND VOLTAGE: *Alternating current, single-phase, nominally at 120/240 volts, three-wire. Where available, and the demand justifies, three-phase four-wire, Y connected service may be had at 208Y/120 volts nominally.*

In certain city districts, alternating current is supplied from a Y connected secondary network from which 120/208 volts, three-wire service may be taken.

RATE PER MONTH:

Full Service Customers:

Power Supply Charges:

Capacity Energy Charge (June through September):
7.941 cents per kWh for all On-peak kWh
4.828 cents per kWh for all Off-peak kWh

Capacity Energy Charge (October through May):
5.560 cents per kWh for all On-peak kWh
4.828 cents per kWh for all Off-peak kWh

Non-Capacity Energy Charge (June through September):
6.160¢ per kWh for all On-peak kWh
3.746¢ per kWh for all Off-peak kWh

Non - capacity Energy Charge (October through May):
4.313¢ per kWh for all On-peak kWh
3.746¢ per kWh for all Off-peak kWh

On-Peak Hours: *All kWh used between 3:00PM and 7:00PM Monday through Friday.*
Off-Peak Hours: *All other kWh used.*

Delivery Charges:

Service Charge: *$8.50 per month*
Distribution Charge: *6.879¢ per kWh for all kWh*

Surcharges and Credits: *As approved by the Commission. See Sections C8.5 and C9.8.*

(Continued on Sheet No. D-14.06)

(Continued from Sheet No. D-14.05)

RATE SCHEDULE NO. D1.11 (Contd.) ***RESIDENTIAL SERVICE RATE – STANDARD TOU***

Retail Access Service Customers:

Power Supply Charges for Retail Access Customers taking Utility Capacity service for DTE:

Capacity Energy Charge (June through September):
7.941 cents per kWh for all On-peak kWh
4.828 cents per kWh for all Off-peak kWh

Capacity Energy Charge (October through May):
5.560 cents per kWh for all On-peak kWh
4.828 cents per kWh for all Off-peak kWh

Delivery Charges:

Service Charge:	***$8.50 per month***
Distribution Charge:	***6.879¢ per kWh for all kWh***

Surcharges and Credits: As approved by the Commission. Capacity related surcharges and credits applicable to power supply, excluding PSCR, as approved by the Commission. See Sections C8.5 and C9.8.

LATE PAYMENT CHARGE: See Section C4.8.

MINIMUM CHARGE: The Service Charge plus any applicable per meter per month surcharges.

CONTRACT TERM: The customer shall contract to remain on this rate for at least 12 months terminable on three days' notice after the initial 12 months by either party, at which time the customer may take service on any other rate for which they are eligible. Customers who are transitioned to this rate by the Company may elect service on an alternate rate until September 30, 2023. Any such customer remaining on the rate after September 30, 2023 will be subject to the 12-month service requirement, determined as 12 months from the first date of service on this rate.

WATER HEATING SERVICE: Water heating service is available on an optional basis.

INTERRUPTIBLE SPACE CONDITIONING PROVISION: Rate D1.1 is available on an optional basis.

INCOME ASSISTANCE SERVICE PROVISION (RIA): When service is supplied to a Principal Residence Customer, where the household receives a Home Heating Credit (HHC) in the State of Michigan, a credit shall be applied during all billing months. For an income assistance customer to qualify for this credit, the Company shall require annual evidence of the HHC energy draft or warrant. The customer may also qualify for this credit upon confirmation by an authorized State or Federal agency verifying that the customer's total household income does not exceed 150% of the poverty level as published by the United States department of health and human services or if the customer receives any of the following: i) Assistance from a state emergency relief program; ii) Food stamps or iii) Medicaid.

The monthly credit for the residential Income Assistance Service Provision shall be applied as follows:

Delivery Charges: These charges are applicable to Full Service and Retail Open Access customers.

Income Assistance Credit: ***$(8.50) per customer per month***

(Continued on Sheet No. D-14.07)

(Continued from Sheet No. D-14.06)

RATE SCHEDULE NO. D1.11** (Contd.)* ***RESIDENTIAL SERVICE RATE – STANDARD TOU

RESIDENTIAL SERVICE SENIOR CITIZEN PROVISION: When service is supplied to a Principal Residence Customer, who is 65 years of age or older and head of household, a credit shall be applied during all billing months. The monthly credit for the Residential Service Senior Citizen Provision shall be applied as follows:

Delivery Charges: These charges are applicable to Full Service and Retail Open Access customers.
Senior Citizen Credit: $(4.25) per customer per month

This credit shall not be taken in conjunction with a credit for the Income Assistance Service Provision (RIA).

RATE SCHEDULE NO. D2 **RESIDENTIAL *SERVICE RATE* - SPACE HEATING**

AVAILABILITY OF SERVICE: Available on an optional basis to customers desiring service for all residential purposes to a single or double occupancy dwelling unit including farm dwellings. All of the space heating must be total electric installed on a permanent basis and served through one meter. This rate also available to customers with add-on heat pumps and fossil fuel furnaces served on this rate prior to July 16, 1985. The design and method of installation and control of equipment as adopted to this service are subject to approval by the Company. This rate is also available to customers with electric heat assisted with a renewable heat source.

This rate is available only to dwellings being served on this rate prior to December 17, 2015.

HOURS OF SERVICE: 24 hours.

CURRENT, PHASE AND VOLTAGE: Alternating current, single-phase, nominally at 120/240 volts, three-wire. Where available, and the demand justifies, three-phase four-wire, Y connected service may be had at 208Y/120 volts nominally. In certain city districts, alternating current is supplied from a Y connected secondary network from which 120/208 volt three-wire service may be taken.

RATE PER DAY:

Full Service Customers:

Power Supply Charges:

Capacity Energy Charges: (June through October):	***3.997*¢** per kWh for the first 17 kWh per day
	***5.716*¢** per kWh for over 17 kWh per day
Capacity Energy Charges: (November through May):	***2.358*¢** per kWh for the first 20 kWh per day
	***0.920*¢** per kWh for over 20 kWh per day
Non-Capacity energy Charge:	***4.123*¢** per kWh for all kWh

Delivery Charges:

Service Charge	$***8***.50 per month
Distribution Charge: (June through October):	***6.879*¢** per kWh for all kWh
Distribution Charge: (November through May):	***6.879*¢** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8. Applies only to actual consumption and not to the minimum charge

Retail Access Service customers:

Power Supply Charges for Retail Access Customers taking Utility Capacity Service from DTE***:***

Capacity Energy Charges: (June through October):	***3.997*** per kWh for the first 17 kWh per day
	***5.716*¢** per kWh for over 17 kWh per day
Capacity Energy Charges: (November through May):	***2.358*¢** per kWh for the first 20 kWh per day
	***0.920*¢** per kWh for over 20 kWh per day

(Continued on Sheet No. D-16.00)

(Continued from Sheet No. D-15.00)

RATE SCHEDULE NO. D2 (Contd.) **RESIDENTIAL *SERVICE RATE* - SPACE HEATING**

Delivery Charges:

Service Charge	$***8***.50 per month
Distribution Charge: (June through October):	***6.879¢*** per kWh for all kWh
Distribution Charge: (November through May):	***6.879¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Section C9.8. Applies only to actual consumption and not to the minimum charge. Capacity related surcharges and credits applicable to power supply, excluding PSCR, as approved by the Commission. See Section C8.5.

BILLING FREQUENCY: Based on a nominal 30-day month. See Section C4.5.

MINIMUM CHARGE: The Service Charge plus any applicable per meter per month surcharges.

CONTRACT TERM: Open order, terminable on three days' notice by either party. Where special services are required, the term will be as specified in the applicable contract rider.

WATER HEATING SERVICE: Water heating service is available on an optional basis. See Schedule Designation No. D5.

LATE PAYMENT CHARGE: See Section C4.8.

INTERRUPTIBLE SPACE-CONDITIONING PROVISION: Rate D1.1 is available on an optional basis.

INSULATION STANDARDS FOR ELECTRIC HEATING: See Section C4.9.

INCOME ASSISTANCE SERVICE PROVISION (RIA): When service is supplied to a Principal Residence Customer, where the household receives a Home Heating Credit (HHC) in the State of Michigan, a credit shall be applied during all billing months. For an income assistance customer to qualify for this credit, the Company shall require annual evidence of the HHC energy draft or warrant. The customer may also qualify for this credit upon confirmation by an authorized State or Federal agency verifying that the customer's total household income does not exceed 150% of the poverty level as published by the United States department of health and human services or if the customer receives any of the following: i) Assistance from a state emergency relief program; ii) Food stamps or iii) Medicaid.
The monthly credit for the residential Income Assistance Service Provision shall be applied as follows:

Delivery Charges: These charges are applicable to Full Service and Retail Open Access customers.
Income Assistance Credit: $(***8***.50) per customer per month

M.P.S.C. No. 1 - Electric
DTE Electric Company
(Final Order Case No. U-20836)

Ninth Revised Sheet No. D-18.00
Cancels Eighth Revised Sheet No. D-18.00

RATE SCHEDULE NO. D3 **GENERAL SERVICE RATE**

AVAILABILITY OF SERVICE: Available to customers desiring service for any purpose, except that this rate is not available for service in conjunction with the Large General Service Rate. At the Company's option, service may be available to loads in excess of 1000 kW for situations where significant modifications to service facilities are not required to serve the excess load. The 1000 kW discretionary demand restriction does not apply to service provided to Electric Vehicle Fast-Chargin Stations until June 1, 2024**.** Effective May 27, 1981, this rate is not available to customers desiring service through one meter for residential purposes to a single or double occupancy dwelling unit.

HOURS OF SERVICE: 24 hours.

CURRENT, PHASE AND VOLTAGE: Alternating current, single-phase, nominally at 120/240 volts, three-wire; or three-phase four-wire, Y connected at 208Y/120 volts; or under certain conditions three-phase four-wire, Y connected at 480Y/277 volts.

In certain city districts, alternating current is supplied from a Y connected secondary network from which 120/208 volts, single-phase three-wire; or 208Y/120 volts, three-phase four-wire service may be taken.

RATE PER MONTH:

Full Service Customers:

Power Supply Charges:
Capacity Energy Charge: ***3.808¢*** per kWh for all kWh
Non-Capacity Energy Charge***:*** ***4.105¢*** per kWh for all kWh

Delivery Charges:
Service Charge: $11.25 per month
Distribution Charge: ***4.320¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

Retail Access Service Customers:
Power Supply Charges for Retail Access Service Customers taking Utility Capacity Service from DTE:
Capacity Energy Charg***e:*** ***3.808¢*** per kWh for all kWh

Delivery Charges:
Service Charge: $11.25 per month
Distribution Charge: ***4.320¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Section C9.8. Capacity related surcharges and credits applicable to power supply, excluding PSCR, as approved by the Commission. See Section C8.5.

LATE PAYMENT CHARGE: See Section C4.8.

MINIMUM CHARGE: The Service Charge plus any applicable per meter per month surcharges.

(Continued on Sheet No. D-19.00)

Issued ________________
M. Bruzzano
Vice President
Corporate Strategy & Regulatory Affairs

Detroit, Michigan

Effective for service rendered on
and after _____________, 2022

Issued under authority of the
Michigan Public Service Commission
dated ________________
in Case No. U-20836

RATE SCHEDULE NO. D3.1 **UNMETERED GENERAL SERVICE RATE**

AVAILABILITY OF SERVICE: Available at the option of the Company to customers for loads that can be readily calculated and are impractical to meter.

HOURS OF SERVICE: 24 hours.

CURRENT, PHASE AND VOLTAGE: Alternating current, single-phase, nominally at 120/240 volts, three-wire; or three-phase four-wire, Y connected at 208Y/120 volts; or under certain conditions three-phase four-wire, Y connected at 480Y/277 volts.

In certain city districts, alternating current is supplied from a Y connected secondary network from which 120/208 volts, three-wire; or 208Y/120 volts, three-phase four-wire service may be taken.

SERVICE CONNECTIONS: The customer is to furnish and maintain all necessary wiring and equipment, or reimburse the Company therefore. Connections are to be brought to the Company's underground or overhead lines by the customer as directed by the Company, and the final connections to the Company's line are to be made by the Company.

Conversion and/or relocation of existing facilities must be paid for by the customer, except when initiated by the Company. The detailed provisions and schedule of such charges will be quoted upon request.

RATE: Capacity charge of ***3.170¢*** and non-capacity charge of ***7.738¢*** both applied per month per kilowatthour of the total connected load in service for each customer. Loads operated cyclically will be prorated. This rate is based on 350 hours per month. Proration of cyclical loads will not apply when hours of operation are within 10% of base. Proration may either increase or decrease connected load.

The Company may, at its option, install meters and apply a standard metered rate schedule applicable to the service.

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

LATE PAYMENT CHARGE: See Section C4.8.

MINIMUM CHARGE: $3.00 per month.

CONTRACT TERM: Open order on a month-to-month basis.

RATE SCHEDULE NO. D3.2 **SECONDARY EDUCATIONAL INSTITUTION RATE**

AVAILABILITY OF SERVICE: Available to Educational Institution (school, college, university) customer locations desiring service at secondary voltage. School shall mean buildings, facilities, playing fields, or property directly or indirectly used for school purposes for children in grades kindergarten through twelve, when provided by a public or nonpublic school. School does not include instruction provided in a private residence or proprietary trade, vocational training, or occupational school. "College" or "University" shall mean buildings owned by the same customer which are located on the same campus and which constitute an integral part of such college or university facilities.

HOURS OF SERVICE: 24 hours.

CURRENT, PHASE AND VOLTAGE: Alternating current, single-phase, nominally at 120/240 volts, three-wire; or three-phase four-wire, Y connected at 208Y/120 volts; or under certain conditions three-phase four-wire, Y connected at 480Y/277 volts.

In certain city districts, alternating current is supplied from a Y connected secondary network from which 120/208 volts, single-phase three-wire; or 208Y/120 volts, three-phase four-wire service may be taken.

RATE PER MONTH:

Full Service Customers:

Power Supply Charges:

Capacity Energy Charge: ***3.140¢*** per kWh for all kWh
Non-Capacity Energy Charge***:*** ***4.130¢*** per kWh for all kWh

Delivery Charges:

Service Charge: $11.25 per month
Distribution Charge: ***4.320¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

Retail Access Service Customers:

Power Supply Charges for Retail Access Service Customers taking Utility Capacity Service from DTE:
Capacity Energy Charge***:*** ***3.140¢*** per kWh for all kWh

Delivery Charges:

Service Charge: $11.25 per month
Distribution Charge: ***4.320¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Section C9.8. Capacity related surcharges and credits applicable to power supply, excluding PSCR, as approved by the approved commission. See section C8.5.

LATE PAYMENT CHARGE: See Section C4.9.

MINIMUM CHARGE: The Service Charge plus any applicable per meter per month surcharges.

(Continued on Sheet No. D-20.02)

RATE SCHEDULE NO. D3.3 **INTERRUPTIBLE GENERAL SERVICE RATE**

AVAILABILITY OF SERVICE: Available to no more than 300 customers desiring interruptible service in conjunction with service taken under the general service rate. Service to interruptible load may be taken through separately metered circuits and permanently wired. The design and method of installation for application of this rate shall be subject to the approval of the Company. Service to interruptible load may not be transferred to firm service circuits to avoid interruption. At the Company's option, in lieu of the requirement for separately metered circuits and associated interruption equipment the customer may elect to contract for a minimum firm load demand to protect product or process loads in accordance with the product protection provision of this tariff. Under this option, interval demand metering will be installed in order to monitor compliance when called to interrupt load. This rate is not available for loads that are primarily off-peak, such as outdoor lighting.

HOURS OF SERVICE: 24 hours except as described below.

HOURS OF INTERRUPTION: All interruptible load served hereunder shall be subject to interruption by the Company and may include interruptions for, but not limited to, maintaining system integrity, making an emergency purchase, economic reasons, or when available system generation is insufficient to meet anticipated system load. A System Integrity Interruption Order may be given by the Company when the failure to interrupt will contribute to the implementation of the rules for emergency electrical procedures under Section C3.

NOTICE OF INTERRUPTION: The customer shall be provided, whenever possible***; 1)*** notice in advance (generally 1 hour) of probable interruption***; 2)*** the time in which customer must fully reduce its interruptible load, and***; 3)*** the estimated duration of the interruption. ***The customer shall be provided notice of the actual end time for the system integrity order.***

NON-INTERRUPTION PENALTY: A customer who does ***not*** fully comply with the timing and load reduction prescribed in the Notice of Interruption shall be billed at the ***higher of (i) the*** rate of $50 per kW applied to the highest 60-minute integrated interruptible demand (kW) ***or (ii) the actual damages incurred by the Company, including any MISO penalties***, in addition to the prescribed monthly rate. In addition, the interruptible contract capacity of a customer who does not fully comply with an interruption order may be immediately reduced by the amount by which the customer failed to interrupt, unless the customer demonstrates that failure to interrupt was beyond its control.

CURRENT, PHASE AND VOLTAGE: Alternating current, single-phase, nominally at 120/240 volts, three-wire; or three-phase four-wire, Y connected at 208Y/120 volts; or under certain conditions three-phase four-wire, Y connected at 480Y/277 volts.

In certain city districts, alternating current is supplied from a Y connected secondary network from which 120/208 volts, single-phase three-wire; or 208Y/120 volts, three-phase four-wire service may be taken.

RATE PER MONTH:

Full Service Customers:

Power Supply Charges:

Capacity Energy Charge:	***3.181¢*** per kWh for all kWh
Non-Capacity Energy Charge***:***	***3.430¢*** per kWh for all kWh

Delivery Charges:

Service Charge:	$11.25 per month
Distribution Charge:	***4.320¢*** per kWh for all kWh

(Continued on Sheet No. D-22.00)

(Continued from Sheet No. D-21.00)

RATE SCHEDULE NO. D3.3 (Contd.) **INTERRUPTIBLE GENERAL SERVICE RATE**

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

Retail Access Service Customers:

Power Supply Charges for Retail Access Service Customers taking Utility Capacity Service from DTE***:***
Capacity Energy Charge: ***3.181¢*** per kWh for all kWh

Delivery Charges:
Service Charge: $11.25 per month
Distribution Charge: ***4.320¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Section C9.8. Capacity related surcharges and credits applicable to power supply, excluding PSCR, as approved by the commission. See Section C8.5.

LATE PAYMENT CHARGE: See Section C4.8.

MINIMUM CHARGE: The Service Charge plus any applicable per meter per month surcharges.

PRODUCT PROTECTION PROVISION: (Full Service Customers Only): A customer on rate D3.3 may elect to contract for a minimum load during the period of interruption to protect his product or process. This minimum load called "product protection load" shall not exceed 50% of the total contracted interruptible load and shall be charged rates equal to the General Servic Rate (D3) power supply charge.

CONTRACT TERM: The contract term is one year, extending thereafter from month-to-month until terminated by mutual consent or on twelve months written notice by either party, which may be given at any time after the end of the first year. However, where special services are required or where the investment to serve is out of proportion to the revenue derived there from, the contract term will be as specified in the applicable contract rider or Extension of Service Agreement.

RATE SCHEDULE NO. D3.5 — ***COMPANY OWNED EV CHARGING SERVICE PILOT***

***AVAILABILITY OF SERVICE:** Available on an optional basis to customers for use of Company-owned electric vehicle charging equipment. The service may be offered by the Company for charging infrastructure of any kilowatt (kW) capacity at the Company's discretion. Availability shall be subject to the technical compatibility of the customer's vehicle and the charging equipment. This rate is limited to 100 individual chargers. EV charging equipment will be sited at the Company's discretion.*

***HOURS OF SERVICE:** 24 hours.*

***CURRENT, PHASE AND VOLTAGE:** Service on this rate will be delivered at varying current, phase, and voltage subject to the technical specifications of the customer's vehicle and the EV charging equipment.*

***RATES:** This service is offered as a volumetric charge at the market price of energy, and a single fixed charge encompassing all power supply capacity charges, delivery charges, and surcharges. The volumetric charge is consistent across EV charging equipment capacity. There is a separate fixed charge based on EV charging equipment capacity.*

The relevant volumetric charge and session fee will be available to the customer before they choose to take service under this rate.

Volumetric Charges:

Non-Capacity Energy Charge (on peak):	*4.656¢ per kWh*
Non-Capacity Energy Charge (off peak):	*3.869¢ per kWh*

Fixed Charges:

Session Fee (< 200 kW charger)	*$25 per vehicle-session*
Session Fee (≥ 200 kW charger)	*$70 per vehicle-session*

*Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8. Those surcharges reflected on a per meter basis in Sections C8.5 and C9.8 will be converted to a volumetric equivalent for this rate schedule using the following formula: ((meter/month rate)*12 months*count of installed chargers) / total projected sales*

***METERING:** Usage on this rate will be metered at the EV charging equipment*

***BILLING:** An accepted form of payment is required to take service on this rate. Customers taking service on this rate will be billed at the time of service. The billing transaction may be managed by a third-party vendor on behalf of the Company.*

***LATE PAYMENT CHARGE:** Payment is required at the point-of-sale*

***MINIMUM CHARGE:** The Session Fee*

***CONTRACT TERM:** Effective for the period of the charging session and governing the rates, metering, and billing of the service. There is no contractual relationship between the customer and Company beyond the charging session.*

(Continued on Sheet D-23.01)

(Continued from Sheet D-23.00)

RATE SCHEDULE NO. D3.5 ***COMPANY OWNED EV CHARGING SERVICE PILOT***

SCHEDULE OF ON-PEAK HOURS: The on-peak period is defined as 2:00PM – 5:00PM, weekdays. All other hours are considered off-peak.

RATE SCHEDULE NO. D4 **LARGE GENERAL SERVICE RATE**

AVAILABILITY OF SERVICE: Available to customers desiring service for any purpose, except that this rate is not available for service in conjunction with the General Service Rate.

Effective May 27, 1981, this rate is not available to customers desiring service through one meter for residential purposes to a single or double occupancy dwelling unit.

HOURS OF SERVICE: 24 hours.

CURRENT, PHASE AND VOLTAGE: Alternating current, single-phase, nominally at 120/240 volts, three-wire; or three-phase four-wire, Y connected at 208Y/120 volts; or under certain conditions three-phase four-wire, Y connected at 480Y/277 volts.

In certain city districts, alternating current is supplied from a Y connected secondary network from which 120/208 volts, single-phase three-wire; or 208Y/120 volts, three-phase four-wire service may be taken.

RATE PER MONTH:

Full Service Customers:

Power Supply Charges:

Capacity Demand Charge:	$***13.39*** per kW applied to the Monthly Billing Demand
Non-Capacity Demand Charges***:***	***$2.73*** per kW applied to the Monthly Billing Demand
Non-Capacity Energy Charges***:***	***3.90¢*** per kWh for the first 200 kWh per kW of billing demand
	3.010¢ per kWh for the excess

Delivery Charges:

Service Charge:	$13.67 per month
Distribution Demand Charge:	$***17.86*** per kW applied to the Monthly Billing Demand

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

Retail Access Service Customers:

Power Supply Charges for Retail Access Service Customers taking Utility Capacity Service from DTE:

Capacity Demand Charge:	$***13.39*** per kW applied to the Monthly Billing Demand

Delivery Charges:

Service Charge:	$13.67 per month
Distribution Demand Charge:	$***17.86*** per kW applied to the Monthly Billing Demand

(Continued on Sheet No. D-25.00)

RATE SCHEDULE NO. D5 **WATER HEATING SERVICE RATE**

AVAILABILITY OF SERVICE: Available to customers using hot water for sanitary purposes (other uses subject to the approval of the Company) and taking service under Residential and General Service Rate Schedules. This rate is also available to customers with solar assisted hot water heaters. Company approved waste heat reclamation systems and heat pump water heaters when used in conjunction with an approved electric water heater are also acceptable for use.

Available to customers who desire controlled water heating service to all of the heating elements of electric water heaters, the design and method of installation of which are approved by the Company as adapted to this service, taken through a separately metered circuit to which no other load except water heating may be connected.

HOURS OF SERVICE: The daily use of all controlled water heating service will be controlled by a timer or other monitoring device. Control of service shall not exceed 4 hours per day, said hours to be established from time to time by the Company.

CURRENT, PHASE AND VOLTAGE: Alternating current, single-phase, nominally at 240 volts, three-wire, except that, in certain city districts, alternating current service at 208 volts, nominal, three-wire, or three-phase at the option of the Company.

RATE PER MONTH:

Full Service Customers:

Residential Power Supply Charges:
Capacity Energy Charge: ***2.102¢*** per kWh for all kWh
Non-Capacity Energy Charge: ***2.709¢*** per kWh for all kWh

Residential Delivery Charges:
Service Charge: $1.95 per month
Distribution Charge: ***6.879¢*** per kWh for all kWh

Commercial Power Supply Charges:
Capacity Energy Charge: ***2.242¢*** per kWh for all kWh
Non-Capacity Energy Charge: ***2.417¢*** per kWh for all kWh

Commercial Delivery Charges:
Service Charge: $1.95 per month
Distribution Charge: **4.320¢** per kWh for all kWh

Retail Access Service Customers:
Residential Power Supply Charges for Retail Access Service Customers taking Utility Capacity Service from DTE:

Capacity Energy Charge***:*** ***2.102¢*** per kWh for all kWh

(Continued on Sheet No. D-27.00)

Issued ________________
M. Bruzzano
Vice President
Corporate Strategy & Regulatory Affairs

Detroit, Michigan

Effective for service rendered on
and after _____________, 2022

Issued under authority of the
Michigan Public Service Commission
dated ________________
in Case No. U-20836

(Continued from Sheet No. D-26.00)

RATE SCHEDULE NO. D5 (Contd.) **WATER HEATING SERVICE RATE**

Retail Access Service Customers (contd):
Residential Power Supply Charges for Retail Access Service Customers taking Utility Capacity Service from DTE (contd):

Residential Delivery Charges:
Service Charge: $1.95 per month
Distribution Charge: ***6.879¢*** per kWh for all kWh

Commerical Power Supply Charges for Retail Access Service Customers taking Utility Capacity Service from DTE***:***

Capacity Energy Charge***:*** ***2.242¢*** per kWh for all kWh

Commercial Delivery Charges:
Service Charge: $1.95 per month
Distribution Charge: ***4.320¢*** per kWh for all kWh

SURCHARGES AND CREDITS: As approved by the Commission. Power Supply Charges are subject to Section C8.5. Delivery Charges are subject to Section C9.8. Capacity related surcharges and credits applicable topower supply, excluding PSCR, as approved by the Commission. see Section C8.5.

CONTRACT TERM: Open order, terminable or three days' notice by either party. Where special services are required, the term will be as specified in the applicable contract rider.

LATE PAYMENT CHARGE: See Section C4.8.

MINIMUM CHARGE: The Service Charge plus any applicable per meter per month surcharges.

WATER HEATER REQUIREMENTS FOR WATER HEATER RATE APPLICATION:

Rate Option	Minimum Tank Capacity*	Maximum Total Connected Load**
Residential	30 gallons	5.5 kW

Rate Option	Minimum Tank Capacity*	Maximum Total Connected Load**
Commercial	2 gallons per kW of total connected load 40 gallon minimum	Controlled by minimum tank capacity requirements

*No limitation to number of tanks
**Single or multi-element

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RATE SCHEDULE NO. D6.2 **PRIMARY EDUCATIONAL INSTITUTION RATE**

AVAILABILITY OF SERVICE: Available to Educational Institution (school, college, university) customer locations desiring service at primary, sub-transmission, or transmission voltage who contract for a specified capacity of not less than 50 kilowatts at a single location. School shall mean buildings, facilities, playing fields, or property directly or indirectly used for school purposes for children in grades kindergarten through twelve, when provided by a public or nonpublic school. School does not include instruction provided in a private residence or proprietary trade, vocational training, or occupational school. "College" or "University" shall mean buildings owned by the same customer which are located on the same campus and which constitute an integral part of such college or university facilities.

HOURS OF SERVICE: 24 hours, subject to interruption by agreement, or by advance notice.

CURRENT, PHASE AND VOLTAGE: Alternating current, three-phase, nominally at 4,800, 13,200, 24,000, 41,570 or 120,000 volts at the option of the Company.

CONTRACT CAPACITY: Customers shall contract for a specified capacity in kilowatts sufficient to meet normal maximum requirements but not less than 50 kilowatts. The Company undertakes to provide the necessary facilities for a supply of electric power from its primary distribution system at the contract capacity. Any single reading of the demand meter in any month that exceeds the contract capacity then in effect shall become the new contract capacity. The contract capacity for customers served at more than one voltage level shall be the sum of the contract capacities established for each voltage level.

RATE PER MONTH:

Full Service Customers:

Power Supply Charges:

Capacity

Demand Charge: $***13.27*** per kW of on-peak billing demand

Voltage Level Discount:

$***0.56*** per kW at transmission level
$***0.27*** per kW at subtransmission level

Non-Capacity

Energy Charges: ***4.152¢*** per kWh for all on-peak kWh
3.852¢ per kWh for all off-peak kWh

Voltage Level Discount:

0***.155¢*** per kWh at transmission level
0***.070¢*** per kWh at subtransmission level

Delivery Charges:

Primary Service Charge: $70 per month
Subtransmission and Transmission Service Charge: $375 per month
Distribution Charges:

For primary service (less than 24 kV) $***5.33*** per kW of maximum demand.
For service at subtransmission voltage (24 to 41.6 kV) $***2.21*** per kW of maximum demand.
For service at transmission voltage (120 kV and above) $***0.93*** per kW of maximum demand.

(Continued on Sheet No. D-36.02)

(Continued from Sheet No. D-36.01)

RATE SCHEDULE NO. D6.2 (Contd.) **PRIMARY EDUCATIONAL INSTITUTION RATE**

Full Service Customers (Contd):

Substation Credit: Available to customers where service at sub-transmission voltage level (24 to 41.6 kV) or higher is required, who provide the on-site substation including all necessary transforming, controlling and protective equipment. A credit of $0.30 per kW of maximum demand shall be applied to the maximum demand charge. A credit of 0.040¢ per kWh shall be applied to the energy charge where the service is metered on the primary side of the transformer.

Surcharges and Credits: As approved by the Commission. See Section C9.8.

Retail Access Service Customers:

Capacity (Only applicable to Retail Access Service Customers receiving utility Capacity Service from DTE Electric)

Demand Charge***:*** $***13.27*** per kW of on-peak billing demand

Voltage Level Discount:

$***0.56*** per kW of on-peak billing demand at transmission level
$***0.27*** per kW of on-peak billing demand at subtransmission level

Capacity related surcharges and credits applicable to power supply, excluding PSCR, as approved by the Commission. See Section C8.5.

Delivery Charges:

Primary Service Charge: $70 per month
Subtransmission and Transmission Service Charge: $375 per month
Distribution Charges:

For primary service (less than 24 kV) $***5.33*** per kW of maximum demand.
For service at subtransmission voltage (24 to 41.6 kV) $***2.21*** per kW of maximum demand.
For service at transmission voltage (120 kV and above) $***0.93*** per kW of maximum demand.

Substation Credit: Available to customers where service at sub-transmission voltage level (24 to 41.6 kV) or higher is required, who provide the on-site substation including all necessary transforming, controlling and protective equipment. A credit of $0.30 per kW of maximum demand shall be applied to the maximum demand charge. A credit of 0.040¢ per kWh shall be applied to the energy charge where the service is metered on the primary side of the transformer.

LATE PAYMENT CHARGE: See Section C4.8.

DEFINITION OF CUSTOMER VOLTAGE LEVEL: See Section C13.

MONTHLY ON-PEAK BILLING DEMAND: The monthly on-peak billing demand shall be the single highest 30-minute integrated reading of the demand meter during the on-peak hours of the billing period. The monthly on-peak billing demand will not be less than 65% of the highest monthly on-peak metered billing demand during the billing months of June, July, August, September, and October of the preceding eleven billing months, nor less than 50 kilowatts.

(Continued on Sheet No. D-36.03)

RATE SCHEDULE NO. D8 **INTERRUPTIBLE SUPPLY RATE**

AVAILABILITY OF SERVICE: Available to customers desiring separately metered service at primary voltage who contract for a specified quantity of demonstrated interruptible load of not less than 50 kilowatts at a single location. Contracted interruptible capacity on this rate is limited to 300 megawatts.

HOURS OF SERVICE: 24 hours, subject to interruption by agreement, or by advance notice.

CURRENT, PHASE AND VOLTAGE: Alternating current, three-phase, nominally at 4,800, 13,200, 24,000, 41,570 or 120,000 volts at the option of the Company.

CONTRACT CAPACITY: Customers shall contract for a specified capacity in kilowatts sufficient to meet maximum interruptible requirements, but not less than 50 kilowatts. Any single reading of the demand meter in any month that exceeds the contract capacity then in effect shall become the new contract capacity. The interruptible contract capacity shall not include any firm power capacity, except under Product Protection Provision.

CONDITIONS OF INTERRUPTION: All interruptible load served hereunder shall be subject to Capacity Deficiency Orders and System Integrity Interruption Orders.

A Capacity Deficiency Order is a pricing provision that permits a customer to choose to pay higher hourly energy rates when (a) energy prices to the Company in the Midwest ISO energy market are above the D8 energy rate and (b) the Company's available generation assets are insufficient to meet the Company's full service load. The customer has the choice of either paying higher energy rates through the non-interruption fee or avoid paying the higher energy rates by reducing or interrupting load, at the customer's discretion.

A System Integrity Interruption Order is a non-discretionary order requiring a customer to interrupt load. All interruptible load served hereunder shall be subject to interruption by the Company in order to maintain system integrity. A System Integrity Interruption Order may be given by the Company when the failure to interrupt will contribute to the implementation of the rules for emergency electrical procedures under Section C3.

CAPACITY DEFICIENCY ORDER:

NOTICE OF CAPACITY DEFICIENCY: The customer shall be provided ***at least one hour advance notice of a capacity deficiency order. This notice will include the effective start time and estimated duration of the capacity deficiency order along with an estimate of the replacement energy cost in cents per kilowatt-hour. The customer shall be provided notice of the actual end time for the capacity deficiency order.***

RATE SCHEDULE NO. D8 (Contd.) **INTERRUPTIBLE SUPPLY RATE**

NON-INTERRUPTION FEE: Customers who do not interrupt ***by the effective start time*** of a capacity deficiency order shall be billed at the cost of replacement energy plus 0.576¢ per kWh during the time of interruption plus the applicable voltage level charge, but not less than the normal D8 rate. Voltage level charges for service other than transmission voltage are:

0***.134¢*** per kWh at the distribution level.
0***.060¢*** per kWh at the subtransmission level.

SYSTEM INTEGRITY INTERRUPTION ORDER:

NOTICE OF SYSTEM INTEGRITY INTERRUPTION: The customer shall be provided:

1) notice ***at least 1 hour*** in advance of probable interruption***, whenever possible;***
2) the time in which customer must fully reduce load; and
3) the estimated duration of the interruption.

The customer shall be provided notice of the actual end time for the system integrity order.

NON-INTERRUPTION PENALTY: A customer who does not fully comply with the timing and load reduction prescribed in the Notice of System Integrity Interruption shall be billed at the ***higher of (i) the*** rate of $50 per kW applied to the highest 60-minute integrated interruptible demand (kW) created during the interruption period ***or (ii) the actual damages incurred by the Company, including any MISO penalties*** in addition to the prescribed monthly rate. In addition, the interruptible contract capacity of a customer who does not fully comply with a System Integrity interruption order may be immediately reduced by the amount the customer failed to interrupt, unless the customer demonstrates that failure to interrupt was beyond its control.

M.P.S.C. No. 1 - Electric | Ninth Revised Sheet No. D-41.00
DTE Electric Company | Cancels Eighth Revised Sheet No. D-41.00
(Final Order Case No. U-20836)

(Continued from Sheet No. D-40.00)

RATE SCHEDULE NO. D8 (Contd.) **INTERRUPTIBLE SUPPLY RATE**

RATE PER MONTH:

Full Service Customers:

Power Supply Charges:
Capacity

Demand Charge: $***5.90*** per kW of on-peak billing demand
Voltage Level Discount***:***
$***0.25*** per kW of on-peak billing demand at transmission level
$***0.12*** per kW of on-peak billing demand at subtransmission level

Non-Capacity
Demand Charge***:*** $***3.94*** per kW of on-peak billing demand
Voltage Level Discount***:***
$***0.16*** per kW of on-peak billing demand at transmission level
$***0.07*** per kW of on-peak billing demand at subtransmission level

Energy Charge: 4***.148¢*** per kWh for all on-peak kWh
3***.148¢*** per kWh for all off-peak kWh

Voltage Level Discount:
0***.134¢*** per kWh at transmission level
0***.060¢*** per kWh at subtransmission level

Delivery Charges:
Primary Service Charge: $70 per month
Subtransmission and Transmission Service Charge: $375 per month
Distribution Charges:
For primary service (less than 24 kV) $***5.33*** per kW of maximum demand.
For service at subtransmission voltage (24 to 41.6 kV) $***2.21*** per kW of maximum demand.
For service at transmission voltage (120 kV and above) $0***.93*** per kW of maximum demand.

(Continued on Sheet No. D-42.00)

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(Continued from Sheet No. D-41.00)

RATE SCHEDULE NO. D8 (Contd.) **INTERRUPTIBLE SUPPLY RATE**

Substation Credit: Available to customers where service at sub-transmission voltage level (24 to 41.6 kV) or higher is required, who provide the on-site substation including all necessary transforming, controlling and protective equipment. A credit of $0.30 per kW of maximum demand shall be applied to the maximum demand charge. A credit of 0.040¢ per kWh shall be applied to the energy charge where the service is metered on the primary side of the transformer.

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

Retail Access Service customers:

Capacity (only applicable to Retail Access Service Customers receiving Utility Capacity Service from DTE Electric)

Demand Charge: $***5.90*** per kW of on-peak billing demand

Voltage Level Discount:

$0***.25*** per kW of on-peak billing demand at transmission level

$0***.12*** per kW of on-peak billing demand at subtransmission level

Capacity related surcharges and credits applicable to power supply, excluding PSCR, as approved by the Commission. See Section C8.5.

Delivery Charges:

Primary Service Charge***:*** $70 per month

Subtransmission and Transmission Service Charge: $375 per month

Distribution Charges:

For primary service (less than 24 kV) $***5.33*** per kW of maximum demand.

For service at subtransmission voltage (24 to 41.6 kV) $***2.21*** per kW of maximum demand.

For service at transmission voltage (120 kV and above) $***0.93*** per kW of maximum demand.

Substation Credit: Available to customers where service at sub-transmission voltage level (24 to 41.6 kV) or higher is required, who provide the on-site substation including all necessary transforming, controlling and protective equipment. A credit of $.30 per kW of maximum demand shall be applied to the maximum demand charge. A credit of .040¢ per kWh shall be applied to the energy charge where the service is metered on the primary side of the transformer.

Surcharges and Credits: As approved by the Commission. See Section C9.8.

LATE PAYMENT CHARGE: See Section C4.8.

DEFINITION OF CUSTOMER VOLTAGE LEVEL: See Section C13.

MONTHLY ON-PEAK BILLING DEMAND: The monthly on-peak billing demand shall be the single highest 30-minute integrated reading of the demand meter during the on-peak hours of the billing period. In no event will the monthly on-peak billing demand be less than 65% of the highest monthly on-peak metered billing demand during the billing months of June, July, August, September, and October of the preceding eleven billing months, nor less than 50 kilowatts.

(Continued on Sheet No. D-43.00)

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(Continued from Sheet No. D-44.00)

RATE SCHEDULE NO. D9 **OUTDOOR PROTECTIVE LIGHTING**

SPECIAL TERMS AND CONDITIONS (contd.):

The stated charges for underground service on Sheet No. D-46.00 cover the ordinary trenching for cable extensions under normal soil conditions in cleared areas.

(1) Special purpose facilities are considered to be line or cable extensions, transformers, and any additional poles without lights, excluding facilities provided under stated charges on Sheet No. D-45.00. Where special purpose facilities are required, a service charge of 18% per year on the investment in such facilities will be billed in installments as an addition to the regular rate for each light. In the event the customer discontinues service before the end of the contract term, the established rate as well as the service charge on special purpose facilities for the remaining portion of the contract term shall immediately become due and payable. This provision was closed to new installations as of January 22, 1994.

(2) For new installations after January 22, 1994, which require investment in excess of three times the annual revenue, this rate is available only to customers who make a contribution in aid of construction equal to the amount by which the investment exceeds three times the annual revenue at the prevailing rate at the time of installation.

(3) For new underground-fed installations of 5 lights or more after May 1, 2019, which require investment in excess of three times the annual revenue, the customer may elect to pay a post charge for each increment of $1,000 investment required above three times the annual revenue.

(4) As an alternative, where the required contribution exceeds $10,000, upon agreement of the customer and the Company, the customer will pay an additional annual charge of the Company's weighted average cost of capital (***6.79***%) times the contribution amount in lieu of the cash contribution.

DE-ENERGIZED LIGHTS: Customers may elect to have any or all luminaires served under this rate disconnected. The charge per luminaire per year, payable in equal monthly installments, shall be 60% of the regular yearly rates. A $35.00 charge per luminaire will be made at the time of de-energization and at the time of re-energization.

DUSK TO MIDNIGHT SERVICE: For service to parking lots from dusk to approximately twelve o'clock midnight E.S.T., a ***distribution*** discount of 1.060¢ per nominal lamp size wattage per month ***and a 50% reduction in the average monthly hours of use*** will be applied. One control per circuit ***or luminaire*** will be provided.

EXPERIMENTAL PROGRAMMABLE PHOTOCELL SERVICE: Customers may elect to place luminaires on photocells that are programmable to turn off lights at pre-determined times during the night. A ***distribution*** discount of 1.060¢ per nominal lamp size wattage per month ***and a 50% reduction in the average monthly hours of use*** will be applied.

MONTHLY RATES: Overhead Outdoor Protective Lighting with Existing Pole and Existing Secondary Facilities ***(***All-night service***)***.

Power Supply Charges:

Capacity Energy Charge:	0.00***¢*** per kWh for all kWh
Non-Capacity Energy Charge***:***	***4.38***¢ per kWh for all kWh

(Continued on Sheet No. D-45.01)

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M.P.S.C. No. 1 - Electric
DTE Electric Company
(Final Order Case No. U-20836)

Sixth Revised Sheet No. D-45.01
Cancels Fifth Revised Sheet No. D-45.01

(Continued from Sheet No. D-45.00)

RATE SCHEDULE NO. D9 (Contd.) **OUTDOOR PROTECTIVE LIGHTING**

Luminaire Charges:

(a) Nominal Lamp Size	(b) Type of Service	(c) Distribution Charge per Lamp per Month	(d) System Wattage	(e) Average Monthly Hours (4200/12)	(f) Energy Charge	(g) Average Energy Cost per Month (d*e*f/1000)	(h) Average Mon Cost
100 W	Mercury Vapor	*$11.75*	120	350	*$0.0438*	*$1.84*	*$13.58*
175 W	Mercury Vapor	*$14.41*	210	350	*$0.0438*	*$3.22*	*$17.63*
250 W	Mercury Vapor	*$17.08*	300	350	*$0.0438*	*$4.60*	*$21.68*
400 W	Mercury Vapor	*$22.34*	450	350	*$0.0438*	*$6.90*	*$29.24*
1,000 W	Mercury Vapor	*$45.97*	1060	350	*$0.0438*	*$16.24*	*$62.21*
100 W	High Pressure Sodium	*$10.86*	135	350	*$0.0438*	*$2.07*	*$12.93*
150 W	High Pressure Sodium	*$12.86*	200	350	*$0.0438*	*$3.06*	*$15.92*
250 W	High Pressure Sodium	*$16.40*	305	350	*$0.0438*	*$4.67*	*$21.07*
400 W	High Pressure Sodium	*$19.91*	465	350	*$0.0438*	*$7.13*	*$27.03*
1,000 W	High Pressure Sodium	*$39.64*	1100	350	*$0.0438*	*$16.86*	*$56.50*
100 W	Metal Halide	*$10.36*	120	350	*$0.0438*	*$1.84*	*$12.20*
150 W	Metal Halide	*$12.53*	180	350	*$0.0438*	*$2.76*	*$15.29*
175 W	Metal Halide	*$13.61*	210	350	*$0.0438*	*$3.22*	*$16.83*
250 W	Metal Halide	*$16.85*	300	350	*$0.0438*	*$4.60*	*$21.45*
320 W	Metal Halide	*$19.88*	365	350	*$0.0438*	*$5.59*	*$25.47*
400 W	Metal Halide	*$23.34*	460	350	*$0.0438*	*$7.05*	*$30.39*
1,000 W	Metal Halide	*$49.29*	1050	350	*$0.0438*	*$16.09*	*$65.38*
20 - 29 W	LED	*$10.17*	25	350	*$0.0438*	*$0.38*	*$10.56*
30 - 39 W	LED	*$10.24*	35	350	*$0.0438*	*$0.54*	*$10.78*
40 - 49 W	LED	*$10.31*	45	350	*$0.0438*	*$0.69*	*$11.00*
50 - 59 W	LED	*$10.39*	55	350	*$0.0438*	*$0.84*	*$11.23*
60 - 69 W	LED	*$10.76*	65	350	*$0.0438*	*$1.00*	*$11.76*
70 - 79 W	LED	*$11.27*	75	350	*$0.0438*	*$1.15*	*$12.42*
80 - 89 W	LED	*$11.77*	85	350	*$0.0438*	*$1.30*	*$13.07*
90 - 99 W	LED	*$12.28*	95	350	*$0.0438*	*$1.46*	*$13.73*
100 - 109 W	LED	*$12.78*	105	350	*$0.0438*	*$1.61*	*$14.39*
110 - 119 W	LED	*$13.28*	115	350	*$0.0438*	*$1.76*	*$15.05*
120 - 129 W	LED	*$13.79*	125	350	*$0.0438*	*$1.92*	*$15.70*
130 - 139 W	LED	*$14.29*	135	350	*$0.0438*	*$2.07*	*$16.36*
140 - 149 W	LED	*$14.80*	145	350	*$0.0438*	*$2.22*	*$17.02*
150 - 159 W	LED	*$15.31*	155	350	*$0.0438*	*$2.38*	*$17.68*
160 - 169 W	LED	*$15.81*	165	350	*$0.0438*	*$2.53*	*$18.34*
170 - 179 W	LED	*$16.32*	175	350	*$0.0438*	*$2.68*	*$19.00*
180 - 189 W	LED	*$16.83*	185	350	*$0.0438*	*$2.83*	*$19.66*
190 - 199 W	LED	*$17.33*	195	350	*$0.0438*	*$2.99*	*$20.32*
200 - 209 W	LED	*$17.84*	205	350	*$0.0438*	*$3.14*	*$20.98*
210 - 219 W	LED	*$18.35*	215	350	*$0.0438*	*$3.29*	*$21.64*
220 - 229 W	LED	*$18.87*	225	350	*$0.0438*	*$3.45*	*$22.32*
230 - 239 W	LED	*$19.40*	235	350	*$0.0438*	*$3.60*	*$23.00*
240 - 249 W	LED	*$20.27*	245	350	*$0.0438*	*$3.75*	*$24.02*

(Continued on Sheet No. D-45.02)

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(Continued from Sheet No. D-45.01)

RATE SCHEDULE NO. D9 (Contd.) **OUTDOOR PROTECTIVE LIGHTING**

Luminaire Charges(Contd)**:**

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Nominal Lamp Size	Type of Service	Distribution Charge per Lamp per Month	System Wattage	Average Monthly Hours (4200/12)	Energy Charge	Average Energy Cost per Month (d*e*f/1000)	Average Monthly Cost
250 - 259 W	LED	***$21.13***	255	350	***$0.0438***	***$3.91***	***$25.04***
260 - 269 W	LED	***$22.00***	265	350	***$0.0438***	***$4.06***	***$26.06***
270 - 279 W	LED	***$22.86***	275	350	***$0.0438***	***$4.21***	***$27.08***
280 - 289 W	LED	***$23.73***	285	350	***$0.0438***	***$4.37***	***$28.10***
290 - 299 W	LED	***$24.26***	295	350	***$0.0438***	***$4.52***	***$28.78***
300 - 309 W	LED	***$24.79***	305	350	***$0.0438***	***$4.67***	***$29.46***
310 - 319 W	LED	***$25.32***	315	350	***$0.0438***	***$4.83***	***$30.14***
320 - 329 W	LED	***$25.85***	325	350	***$0.0438***	***$4.98***	***$30.83***
330 - 339 W	LED	***$26.38***	335	350	***$0.0438***	***$5.13***	***$31.51***
340 - 349 W	LED	***$26.91***	345	350	***$0.0438***	***$5.29***	***$32.19***
350 - 359 W	LED	***$27.44***	355	350	***$0.0438***	***$5.44***	***$32.88***
360 - 369 W	LED	***$27.96***	365	350	***$0.0438***	***$5.59***	***$33.56***
370 - 379 W	LED	***$28.49***	375	350	***$0.0438***	***$5.75***	***$34.24***
380 - 389 W	LED	***$29.02***	385	350	***$0.0438***	***$5.90***	***$34.92***
390 - 399 W	LED	***$29.55***	395	350	***$0.0438***	***$6.05***	***$35.61***

For installations prior to January 22, 1994. New Pole and Single Span of Secondary Facilities. The above rate plus $24.48 per pole per year.

Effective January 22, 1994 installation requiring additional facilities shall pay a contribution in aid of construction in lieu of the service charge. Contribution is described in paragraph (2) above.

Multiple Lamps on a Single Pole. For each additional luminaire added to the same pole the charge will be at the existing pole rate.

The Energy Policy Act of 2005 states that no Mercury Vapor lamp ballasts may be manufactured or imported after January 1, 2008. As a result, effective January 1, 2008, new Mercury Vapor lamps will no longer be available. Customers with existing Mercury Vapor lamp ballasts will continue to receive service until those fixtures fail. At that time, the luminaire will be converted to LED.

MONTHLY RATES: Underground Outdoor Protective Lighting with Lamp Spacing up to 120 Feet (All-night service).

Power Supply Charges:
Capacity Energy Charge***:*** 0.00¢ per kWh for all kWh
Non-Capacity Energy Charge: ***4.38¢*** per kWh for all kWh

(Continued on Sheet No. D-46.00)

M.P.S.C. No. 1 - Electric
DTE Electric Company
(Final Order Case No. U-20836)

Eleventh Revised Sheet No. D-46.00
Cancels Tenth Revised Sheet No. D-46.00

(Continued from Sheet No. D-45.02)

RATE SCHEDULE NO. D9 (Contd.) **OUTDOOR PROTECTIVE LIGHTING**

Luminaire Charges (Contd)**:**

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Nominal Lamp Size	Type of Service	Distribution Charge per Lamp per Month	System Wattage	Average Monthly Hours (4200/12)	Energy Charge	Average Energy Cost per Month (d*e*f/1000)	Average Month Cost
100 W	Mercury Vapor	$28.09	120	350	$0.0438	$1.84	$29.93
175 W	Mercury Vapor	$30.21	210	350	$0.0438	$3.22	$33.42
250 W	Mercury Vapor	$33.14	300	350	$0.0438	$4.60	$37.74
400 W	Mercury Vapor	$38.14	450	350	$0.0438	$6.90	$45.04
1,000 W	Mercury Vapor	$61.62	1060	350	$0.0438	$16.24	$77.86
70 W	High Pressure Sodium	$25.23	95	350	$0.0438	$1.46	$26.68
100 W	High Pressure Sodium	$26.06	135	350	$0.0438	$2.07	$28.13
150 W	High Pressure Sodium	$27.44	200	350	$0.0438	$3.06	$30.51
250 W	High Pressure Sodium	$30.22	305	350	$0.0438	$4.67	$34.89
400 W	High Pressure Sodium	$34.38	465	350	$0.0438	$7.13	$41.50
1,000 W	High Pressure Sodium	$51.02	1100	350	$0.0438	$16.86	$67.88
100 W	Metal Halide	$26.06	120	350	$0.0438	$1.84	$27.90
150 W	Metal Halide	$27.44	180	350	$0.0438	$2.76	$30.20
175 W	Metal Halide	$28.14	210	350	$0.0438	$3.22	$31.36
250 W	Metal Halide	$30.22	300	350	$0.0438	$4.60	$34.81
400 W	Metal Halide	$34.38	460	350	$0.0438	$7.05	$41.43
1,000 W	Metal Halide	$75.81	1050	350	$0.0438	$16.09	$91.90
20 - 29 W	LED	$26.35	25	350	$0.0438	$0.38	$26.73
30 - 39 W	LED	$26.82	35	350	$0.0438	$0.54	$27.36
40 - 49 W	LED	$27.29	45	350	$0.0438	$0.69	$27.98
50 - 59 W	LED	$27.76	55	350	$0.0438	$0.84	$28.61
60 - 69 W	LED	$28.24	65	350	$0.0438	$1.00	$29.23
70 - 79 W	LED	$28.68	75	350	$0.0438	$1.15	$29.83
80 - 89 W	LED	$29.13	85	350	$0.0438	$1.30	$30.43
90 - 99 W	LED	$29.57	95	350	$0.0438	$1.46	$31.03
100 - 109 W	LED	$30.01	105	350	$0.0438	$1.61	$31.62
110 - 119 W	LED	$30.46	115	350	$0.0438	$1.76	$32.22
120 - 129 W	LED	$30.88	125	350	$0.0438	$1.92	$32.80
130 - 139 W	LED	$31.31	135	350	$0.0438	$2.07	$33.38
140 - 149 W	LED	$31.72	145	350	$0.0438	$2.22	$33.94
150 - 159 W	LED	$32.12	155	350	$0.0438	$2.38	$34.50
160 - 169 W	LED	$32.53	165	350	$0.0438	$2.53	$35.06
170 - 179 W	LED	$32.93	175	350	$0.0438	$2.68	$35.62
180 - 189 W	LED	$33.34	185	350	$0.0438	$2.83	$36.18
190 - 199 W	LED	$33.75	195	350	$0.0438	$2.99	$36.73
200 - 209 W	LED	$34.15	205	350	$0.0438	$3.14	$37.29
210 - 219 W	LED	$34.56	215	350	$0.0438	$3.29	$37.85
220 - 229 W	LED	$34.97	225	350	$0.0438	$3.45	$38.41
230 - 239 W	LED	$35.37	235	350	$0.0438	$3.60	$38.97
240 - 249 W	LED	$35.78	245	350	$0.0438	$3.75	$39.53
250 - 259 W	LED	$36.18	255	350	$0.0438	$3.91	$40.09
260 - 269 W	LED	$36.59	265	350	$0.0438	$4.06	$40.65

(Continued on Sheet No. D-46.01)

Issued _______________
M. Bruzzano
Vice President
Corporate Strategy & Regulatory Affairs

Detroit, Michigan

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(Continued from Sheet No. D-46.00)

RATE SCHEDULE NO. D9 (Contd.) **OUTDOOR PROTECTIVE LIGHTING**

Luminaire Charges (Contd)**:**

(a) Nominal Lamp Size	(b) Type of Service	(c) Distribution Charge per Lamp per Month	(d) System Wattage	(e) Average Monthly Hours (4200/12)	(f) Energy Charge	(g) Average Energy Cost per Month (d*e*f/1000)	(h) Average Monthly Cost
270 - 279 W	LED	***$37.00***	275	350	***$0.0438***	***$4.21***	***$41.21***
280 - 289 W	LED	***$37.40***	285	350	***$0.0438***	***$4.37***	***$41.77***
290 - 299 W	LED	***$37.81***	295	350	***$0.0438***	***$4.52***	***$42.33***
300 - 309 W	LED	***$38.22***	305	350	***$0.0438***	***$4.67***	***$42.89***
310 - 319 W	LED	***$38.62***	315	350	***$0.0438***	***$4.83***	***$43.45***
320 - 329 W	LED	***$39.03***	325	350	***$0.0438***	***$4.98***	***$44.01***
330 - 339 W	LED	***$39.44***	335	350	***$0.0438***	***$5.13***	***$44.57***
340 - 349 W	LED	***$39.84***	345	350	***$0.0438***	***$5.29***	***$45.13***
350 - 359 W	LED	***$40.25***	355	350	***$0.0438***	***$5.44***	***$45.69***
360 - 369 W	LED	***$40.65***	365	350	***$0.0438***	***$5.59***	***$46.25***
370 - 379 W	LED	***$41.06***	375	350	***$0.0438***	***$5.75***	***$46.81***
380 - 389 W	LED	***$41.47***	385	350	***$0.0438***	***$5.90***	***$47.37***
390 - 399 W	LED	***$41.87***	395	350	***$0.0438***	***$6.05***	***$47.93***

Effective January 22, 1994 installation requiring additional facilities shall pay a contribution in aid of construction in lieu of the service charge. Contribution is described in paragraph (2) above.

Effective May 1, 2019, installations requiring additional facilities shall pay a post charge of $***6.62*** per increment of $1,000 of expense in lieu of contribution in aid of construction. Contribution is described in paragraph (3) above.

Long Span

- For lamp spacing over 120 feet up to 325 feet on the same side of street, add to rate per lamp per year $24.48

Semi-Ornamental

- For Semi-Ornamental Systems which employ Ornamental Post Units served from overhead conductors, where such construction is practical, reduce rate per luminaire per year $21.48

Multiple Luminaires on a Single Pole

- For additional luminaires added to the same pole, a reduced rate per luminaire per year on the added luminaire.
  Ornamental $97.92
  Ornamental-Lamp spacing over 120 feet $122.40
  Semi-Ornamental $76.56

The Energy Policy Act of 2005 states that no Mercury Vapor lamp ballasts may be manufactured or imported after January 1, 2008. As a result, effective January 1, 2008, new Mercury Vapor lamps will no longer be available. Customers with existing Mercury Vapor lamp ballasts will continue to receive service until those luminaires fail. At that time, the luminaire will be converted to LED.

M.P.S.C. No. 1 - Electric
DTE Electric Company
(Final Order Case No. U-20836)

Ninth Revised Sheet No. D-47.00
Cancels Eighth Revised Sheet No. D-47.00

RATE SCHEDULE NO. D10 **ALL-ELECTRIC SCHOOL BUILDING SERVICE RATE**

AVAILABILITY OF SERVICE: Available to customers desiring service in school buildings served at primary voltage who contract for a specified installed capacity of not less than 50 kilowatts at a single location provided the space heating and water heating for all or a substantial portion of the premises is supplied by electric service and is installed on a permanent basis.

HOURS OF SERVICE: 24 hours, subject to interruption by agreement, or by advance notice.

CURRENT, PHASE AND VOLTAGE: Alternating current, three-phase, nominally at 4,800 or 13,200 volts at the option of the Company.

RATE PER MONTH:

Full Service Customers:

Power Supply Charges:

Capacity

Energy Charge (June through October):	***4.396¢*** per kWh for all kWh
Energy Charge (November through May):	***2.383¢*** per kWh for all kWh

Non-Capacity

Energy Charge (June through October):	***4.893¢*** per kWh for all kWh
Energy Charge (November through May):	***4.893¢*** per kWh for all kWh

Delivery Charges:

Service Charge:	$70 per month
Distribution Charge:	***1.738¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

Retail Access Service Customers:

Capacity (Only applicable to Retail Access Service Customers receiving Utility Capacity Service from DTE Electric)

Energy Charge (June through October):	***4.396¢*** per kWh for all kWh
Energy Charge (November through May***):***	***2.383¢*** per kWh for all kWh

Capacity related surcharges and credits applicable to power supply, excluding PSCR, as approved by the Commission. See Section C8.5.

Delivery Charges:

Service Charge:	$70 per month
Distribution Charge:	***1.738¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Section C9.8.

(Continued on Sheet No. D-48.00)

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M. Bruzzano
Vice President
Corporate Strategy & Regulatory Affairs

Detroit, Michigan

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RATE SCHEDULE NO. D11 **PRIMARY SUPPLY RATE**

AVAILABILITY OF SERVICE: Available to customers desiring service at primary, sub-transmission, or transmission voltage who contract for a specified capacity of not less than 50 kilowatts at a single location.

HOURS OF SERVICE: 24 hours, subject to interruption by agreement, or by advance notice.

CURRENT, PHASE AND VOLTAGE: Alternating current, three-phase, nominally at 4,800, 13,200, 24,000, 41,570 or 120,000 volts at the option of the Company.

CONTRACT CAPACITY: Customers shall contract for a specified capacity in kilowatts sufficient to meet normal maximum requirements but not less than 50 kilowatts. The Company undertakes to provide the necessary facilities for a supply of electric power from its primary distribution system at the contract capacity. Any single reading of the demand meter in any month that exceeds the contract capacity then in effect shall become the new contract capacity. The contract capacity for customers served at more than one voltage level shall be the sum of the contract capacities established for each voltage level.

RATE PER MONTH:

Full Service Customers:

Power Supply Charges:

Capacity

Demand Charge: $***13.18*** per kW of on-peak billing demand

Voltage Level Discount:

$0***.56*** per kW of on-peak billing demand at transmission level

$0***.27*** per kW of on-peak billing demand at subtransmission level

Non-Capacity

Demand Charge***:*** $***3.23*** per kW of on-peak billing demand

Voltage Level Discount***:***

$0***.13*** per kW of on-peak billing demand at transmission level

$0***.06*** per kW of on-peak billing demand at subtransmission level

Energy Charge: 4***.148¢*** per kWh for all on-peak kWh

3***.148¢*** per kWh for all off-peak kWh

Voltage Level Discount:

0***.134¢*** per kWh at transmission level

0***.060¢*** per kWh at subtransmission level

Delivery Charges:

Primary Service Charge: $70 per month

Subtransmission and Transmission Service Charge: $375 per month

Distribution Charges:

For primary service (less than 24 kV) $***5.33*** per kW of maximum demand.

For service at subtransmission voltage (24 to 41.6 kV) $***2.21*** per kW of maximum demand.

For service at transmission voltage (120 kV and above) $0.***93*** per kW of maximum demand.

Continued on Sheet No. D-48.02)

(Continued from Sheet No. D-48.01)

RATE SCHEDULE NO. D11 (Contd.) **PRIMARY SUPPLY RATE**

Substation Credit: Available to customers where service at sub-transmission voltage level (24 to 41.6 kV) or higher is required, who provide the on-site substation including all necessary transforming, controlling and protective equipment. A credit of $0.30 per kW of maximum demand shall be applied to the maximum demand charge. A credit of 0.040¢ per kWh shall be applied to the energy charge where the service is metered on the primary side of the transformer.

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

Retail Access Service Customers:

Capacity (Only applicable to Retail Access Service Customers receiving Utility Capacity Service from DTE Electric)

Demand Charge: $***13.18*** per kW of on-peak billing demand
Voltage Level Discount***:***
$0***.56*** per kW of on-peak billing demand at transmission level
$0***.27*** per kW of on-peak billing demand at subtransmission level

Capacity related surcharges and credits applicable to power supply, excluding PSCR, as approved by the Commission. See Section C5.8.

Delivery Charges:

Primary Service Charge: $70 per month
Subtrassmission and Transmission Service Charge: $375 per month

Distribution Charges:

For primary service (less than 24 kV) $***5.33*** per kW of maximum demand***.***
For service at subtransmission voltage (24 to 41.6 kV) $***2.21*** per kW of maximum demand.
For service at transmission voltage (120 kV and above) $0***.93*** per kW of maximum demand.

Substation Credit: Available to customers where service at sub-transmission voltage level (24 to 41.6 kV) or higher is required, who provide the on-site substation including all necessary transforming, controlling and protective equipment. A credit of $0.30 per kW of maximum demand shall be applied to the maximum demand charge. A credit of 0.040¢ per kWh shall be applied to the energy charge where the service is metered on the primary side of the transformer.

Surcharges and Credits: As approved by the Commission. See Section C9.8.

LATE PAYMENT CHARGE: See Section C4.8.

DEFINITION OF CUSTOMER VOLTAGE LEVEL: See Section C13.

MONTHLY ON-PEAK BILLING DEMAND: The monthly on-peak billing demand shall be the single highest 30-minute integrated reading of the demand meter during the on-peak hours of the billing period. The monthly on- peak billing demand will not be less than 65% of the highest monthly on-peak metered billing demand during

(Continued on Sheet No. D-48.03)

RATE SCHEDULE NO. D12 **EXPERIMENTAL LARGE CUSTOMER LOW PEAK DEMAND SUPPLY RATE**

AVAILABILITY OF SERVICE: Available on an experimental basis to new full-service customers with a minimum metered contract capacity of 10,000 kW and with high on-peak demands set during the October through May billing months and on-peak demands of ten percent (10%) or less during the June through September billing months and taking service at sub-transmission, or transmission voltage at a single location. Total contracted capacity on this tariff is limited to 100 MW. Service under this tariff may not be combined with any other tariff, rider, or separately metered service except for Rider Nos. 17 or 19.

HOURS OF SERVICE: 24 hours, subject to interruption by agreement, or by advance notice.

CURRENT, PHASE AND VOLTAGE: Alternating current, three-phase, nominally at 24,000, 41,570 or 120,000 volts at the option of the Company.

CONTRACT CAPACITY: Customers shall contract for a specified capacity in kilowatts sufficient to meet normal maximum requirements but not less than 10,000 kilowatts. The Company undertakes to provide the necessary facilities for a supply of electric power from its primary distribution system at the contract capacity. Any single reading of the demand meter in any month that exceeds the contract capacity then in effect shall become the new contract capacity. The contract capacity for customers served at more than one voltage level shall be the sum of the contract capacities established for each voltage level.

RATE PER MONTH:
Full Service Customers:
Power Supply Charges:
Capacity (October through May)
Demand Charge: $0***.31*** per kW of on-peak billing demand

Capacity (June through September)
Demand Charge: $***7.76*** per kW of on-peak billing demand

Capacity Voltage Level Discount:
$(0.005) per kW of on-peak billing demand at transmission level (October through May)
$(0.14) per kW of on-peak billing demand at transmission level (June through September)

Non-Capacity (October through May)
Demand Charge: $0***.31*** per kW of on-peak billing demand

Non-Capacity (June through September)
Demand Charge: $***39.92*** per kW of on-peak billing demand

Non-Capacity Voltage Level Discount:
$(0.005) per kW of on-peak billing demand at transmission level (October through May)
$(***0.68***) per kW of on-peak billing demand at transmission level (June through September)

(Continued on Sheet No. D-48.06)

(Continued from Sheet No. D-48.05)

RATE SCHEDULE NO. D12 (contd.)

EXPERIMENTAL LARGE CUSTOMER LOW PEAK DEMAND SUPPLY RATE

Energy Charge: ***3.988¢*** per kWh for all on-peak kWh
3.502¢ per kWh for all off-peak kWh

Energy Voltage Level Discount: (***0.054***)¢ per kWh at transmission level

Delivery Charges:
Subtransmission Service Charge: $375 per month
Transmission Service Charge: $375 per month

Distribution Charges:
For service at subtransmission voltage (24 to 41.6 kV) $***2.21*** per kW of maximum demand.
For service at transmission voltage (120 kV and above) $***0.93*** per kW of maximum demand.

Substation Credit: Available to customers where service at sub-transmission voltage level (24 to 41.6 kV) or higher is required, who provide the on-site substation including all necessary transforming, controlling and protective equipment. A credit of $0.30 per kW of maximum demand shall be applied to the maximum demand charge. A credit of 0.040¢ per kWh shall be applied to the energy charge where the service is metered on the primary side of the transformer.

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

LATE PAYMENT CHARGE: See Section C4.8.

DEFINITION OF CUSTOMER VOLTAGE LEVEL: See Section C13.

MONTHLY ON-PEAK BILLING DEMAND: The monthly on-peak billing demand shall be the single highest 30-minute integrated reading of the demand meter during the on-peak hours of the billing period, but not less than 50 kilowatts.

MAXIMUM DEMAND: The maximum demand shall be the highest 30-minute demand created during the previous 12 billing months, including the current month but not less than 50% of contract capacity. This clause is applicable to each voltage level served.

MINIMUM CHARGE: All applicable demand charges plus the service charge and any applicable per meter per month surcharges.

SCHEDULE OF ON-PEAK HOURS: See Section C11.

(Continued on Sheet No. D-48.07)

(Continued from Sheet No. D-49.00)

RATE SCHEDULE NO. E1 (Contd.) **MUNICIPAL STREET LIGHTING RATE**

CONTRACT TERM: Minimum 5 year term. Upon expiration of the initial term shall continue on a month-to-month basis until terminated by mutual written consent of the parties or by either party with thirty (30) days prior written notice to the other party. Any conversion, relocation and/or removal of existing street lighting facilities at the customer's request, including those removals necessitated by termination of service, must be paid for by the customer. The detailed provisions and schedule of charges, which may include the remaining value of the existing facilities, will be quoted upon request. The Company shall not withdraw service, and the municipality shall not substitute another source of service in whole or in part, without twelve months' written notice to the other party.

Option I: Company Owned Street Lighting System

Where new installations require an investment in excess of an investment allowance, Option I is available only to customers who make a contribution in aid of construction equal to the amount by which the investment exceeds three times the annual revenue at the prevailing rate at the time of installation. (Effective January 1, 1991, the investment amount will be limited to direct cost. Effective January 1, 1992, the investment amount will include full cost.)

As an alternative, where the required contribution exceeds $10,000, upon agreement of the customer and the Company, the customer will pay an additional annual charge of the Company's weighted average cost of capital (***6.79***%) times the contribution amount in lieu of the cash contribution.

For new underground-fed installations of 5 lights or more after May 1, 2019, which require investment in excess of three times the annual revenue at the prevailing rate at the time of installation, the customer may elect to pay a post charge for each increment of $1,000 investment required above three times the annual revenue.

DE-ENERGIZED LIGHTS: Customers may elect to have any or all luminaires served under this rate disconnected. The charge per luminaire per year, payable in equal monthly installments, shall be 60% of the regular yearly rates. A *$35.00* charge per luminaire will be made at the time of de-energization and at the time of re-energization.

DUSK TO MIDNIGHT SERVICE: For service to parking lots from dusk to approximately twelve o'clock midnight E.S.T., a ***distribution*** discount of 1.060¢ per nominal lamp size wattage per month ***and a 50% reduction in the average monthly hours of use*** will be applied. One control per circuit ***or luminaire*** will be provided.

EXPERIMENTAL PROGRAMMABLE PHOTOCELL SERVICE: Customers may elect to place luminaires on photocells that are programmable to turn off lights at pre-determined times during the night. A ***distribution*** discount of 1.060¢ per nominal lamp size wattage per month ***and a 50% reduction in the average monthly hours on use*** will be applied.

MONTHLY RATES OPTION I: Overhead Municipal Street Lighting *(*All-night service*)*.

Power Supply Charges:
- Capacity Energy Charge: 0.00¢ per kWh for all kWh
- Non-Capacity Energy Charge***: 4.38¢*** per kWh for all kWh

(Continued on Sheet No. D-50.01)

M.P.S.C. No. 1 - Electric
DTE Electric Company
(Final Order Case No. U-20836)

Fifth Revised Sheet No. D-50.01
Cancels Fourth Revised Sheet No. D-50.01

(Continued from Sheet No. D-50.00)

RATE SCHEDULE NO. E1 (Contd.) **MUNICIPAL STREET LIGHTING RATE**

Luminaire Charges:

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Nominal Lamp Size	**Type of Service**	**Distribution Charge per Lamp per Month**	**System Wattage**	**Average Monthly Hours (4200/12)**	**Energy Charge**	**Average Energy Cost per Month (d*e*f/1000)**	**Average Monthly Cost**
100 W	Mercury Vapor	$22.49	120	350	$0.0438	$1.84	$24.33
175 W	Mercury Vapor	$27.78	210	350	$0.0438	$3.22	$31.00
250 W	Mercury Vapor	$33.21	300	350	$0.0438	$4.60	$37.81
400 W	Mercury Vapor	$43.83	450	350	$0.0438	$6.90	$50.72
1,000 W	Mercury Vapor	$87.01	1060	350	$0.0438	$16.24	$103.25
70 W	High Pressure Sodium	$16.73	95	350	$0.0438	$1.46	$18.18
100 W	High Pressure Sodium	$19.08	135	350	$0.0438	$2.07	$21.15
150 W	High Pressure Sodium	$22.90	200	350	$0.0438	$3.06	$25.96
250 W	High Pressure Sodium	$29.72	305	350	$0.0438	$4.67	$34.40
360 W	High Pressure Sodium	$37.10	418	350	$0.0438	$6.41	$43.51
400 W	High Pressure Sodium	$39.86	465	350	$0.0438	$7.13	$46.98
1,000 W	High Pressure Sodium	$72.78	1100	350	$0.0438	$16.86	$89.63
70 W	Metal Halide	$21.75	85	350	$0.0438	$1.30	$23.05
100 W	Metal Halide	$22.03	120	350	$0.0438	$1.84	$23.87
150 W	Metal Halide	$26.74	180	350	$0.0438	$2.76	$29.50
175 W	Metal Halide	$29.10	210	350	$0.0438	$3.22	$32.32
250 W	Metal Halide	$36.17	300	350	$0.0438	$4.60	$40.77
320 W	Metal Halide	$42.22	365	350	$0.0438	$5.59	$47.82
400 W	Metal Halide	$49.14	460	350	$0.0438	$7.05	$56.19
1,000 W	Metal Halide	$101.37	1050	350	$0.0438	$16.09	$117.46
20 - 29 W	LED	$13.59	25	350	$0.0438	$0.38	$13.98
30 - 39 W	LED	$14.57	35	350	$0.0438	$0.54	$15.10
40 - 49 W	LED	$15.54	45	350	$0.0438	$0.69	$16.23
50 - 59 W	LED	$16.51	55	350	$0.0438	$0.84	$17.35
60 - 69 W	LED	$17.48	65	350	$0.0438	$1.00	$18.48
70 - 79 W	LED	$18.46	75	350	$0.0438	$1.15	$19.61
80 - 89 W	LED	$19.43	85	350	$0.0438	$1.30	$20.74
90 - 99 W	LED	$20.41	95	350	$0.0438	$1.46	$21.86
100 - 109 W	LED	$21.39	105	350	$0.0438	$1.61	$23.00
110 - 119 W	LED	$22.37	115	350	$0.0438	$1.76	$24.13
120 - 129 W	LED	$23.35	125	350	$0.0438	$1.92	$25.26
130 - 139 W	LED	$24.31	135	350	$0.0438	$2.07	$26.38
140 - 149 W	LED	$25.08	145	350	$0.0438	$2.22	$27.30
150 - 159 W	LED	$25.84	155	350	$0.0438	$2.38	$28.22
160 - 169 W	LED	$26.61	165	350	$0.0438	$2.53	$29.13

(Continued on Sheet No. D-50.02)

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M. Bruzzano
Vice President
Corporate Strategy & Regulatory Affairs

Detroit, Michigan

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(Continued from Sheet No. D-50.01)

RATE SCHEDULE NO. E1 (Contd.) **MUNICIPAL STREET LIGHTING RATE**

Luminaire Charges (Contd.):

(a) Nominal Lamp Size	(b) Type of Service	(c) Distribution Charge per Lamp per Month	(d) System Wattage	(e) Average Monthly Hours (4200/12)	(f) Energy Charge	(g) Average Energy Cost per Month (d*e*f/1000)	(h) Average Monthly Cost
170 - 179 W	LED	$27.37	175	350	$0.0438	$2.68	$30.05
180 - 189 W	LED	$28.13	185	350	$0.0438	$2.83	$30.97
190 - 199 W	LED	$28.90	195	350	$0.0438	$2.99	$31.88
200 - 209 W	LED	$29.66	205	350	$0.0438	$3.14	$32.80
210 - 219 W	LED	$30.42	215	350	$0.0438	$3.29	$33.72
220 - 229 W	LED	$30.67	225	350	$0.0438	$3.45	$34.12
230 - 239 W	LED	$30.92	235	350	$0.0438	$3.60	$34.52
240 - 249 W	LED	$31.66	245	350	$0.0438	$3.75	$35.41
250 - 259 W	LED	$32.40	255	350	$0.0438	$3.91	$36.30
260 - 269 W	LED	$33.14	265	350	$0.0438	$4.06	$37.20
270 - 279 W	LED	$33.88	275	350	$0.0438	$4.21	$38.09
280 - 289 W	LED	$34.62	285	350	$0.0438	$4.37	$38.98
290 - 299 W	LED	$35.36	295	350	$0.0438	$4.52	$39.88
300 - 309 W	LED	$36.10	305	350	$0.0438	$4.67	$40.77
310 - 319 W	LED	$36.84	315	350	$0.0438	$4.83	$41.67
320 - 329 W	LED	$37.58	325	350	$0.0438	$4.98	$42.56
330 - 339 W	LED	$38.32	335	350	$0.0438	$5.13	$43.45
340 - 349 W	LED	$39.06	345	350	$0.0438	$5.29	$44.35
350 - 359 W	LED	$39.80	355	350	$0.0438	$5.44	$45.24
360 - 369 W	LED	$40.54	365	350	$0.0438	$5.59	$46.13
370 - 379 W	LED	$41.28	375	350	$0.0438	$5.75	$47.03
380 - 389 W	LED	$42.02	385	350	$0.0438	$5.90	$47.92
390 - 399 W	LED	$42.76	395	350	$0.0438	$6.05	$48.82

Multiple Lamps on a Single Pole

- For each additional luminaire added to the same pole, reduce rate per lamp per year on the added luminaire $12.24.

The Energy Policy Act of 2005 states that no Mercury Vapor lamp ballasts may be manufactured or imported after January 1, 2008. As a result, effective January 1, 2008, new Mercury Vapor lamps will no longer be available. Customers with existing Mercury Vapor lamp ballasts will continue to receive service until those luminaires fail. At that time, the luminaire will be converted to LED..

(Continued on Sheet No. D-51.00)

M.P.S.C. No. 1 - Electric
DTE Electric Company
(Final Order Case No. U-20836)

Ninth Revised Sheet No. D-51.00
Cancels Eighth Revised Sheet No. D-51.00

(Continued from Sheet No. D-50.02)

RATE SCHEDULE NO. E1 (Contd.) **MUNICIPAL STREET LIGHTING RATE**

Option I: Company Owned Street Lighting System (Contd.)

MONTHLY RATES OPTION I: Ornamental Underground Municipal Street Lighting for Lamp Spacing up to 120 Feet of Street ***(***All-night service***)***.

Power Supply Charges:
Capacity Energy Charge***:*** 0.00¢ per kWh for all kWh
Non-Capacity Energy Charge***: 4.38¢*** per kWh for all kWh

Luminaire Charges:

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Nominal Lamp Size	**Type of Service**	**Distribution Charge per Lamp per Month**	**System Wattage**	**Average Monthly Hours (4200/12)**	**Energy Charge**	**Average Energy Cost per Month (d*e*f/1000)**	**Average Monthly Cost**
100 W	Mercury Vapor	***$31.62***	120	350	***$0.0438***	***$1.84***	***$33.46***
175 W	Mercury Vapor	***$35.80***	210	350	***$0.0438***	***$3.22***	***$39.02***
250 W	Mercury Vapor	***$41.99***	300	350	***$0.0438***	***$4.60***	***$46.58***
400 W	Mercury Vapor	***$52.36***	450	350	***$0.0438***	***$6.90***	***$59.26***
1,000 W	Mercury Vapor	***$103.08***	1060	350	***$0.0438***	***$16.24***	***$119.32***
70 W	High Pressure Sodium	***$24.47***	95	350	***$0.0438***	***$1.46***	***$25.92***
100 W	High Pressure Sodium	***$27.74***	135	350	***$0.0438***	***$2.07***	***$29.81***
150 W	High Pressure Sodium	***$30.23***	200	350	***$0.0438***	***$3.06***	***$33.30***
250 W	High Pressure Sodium	***$36.71***	305	350	***$0.0438***	***$4.67***	***$41.38***
360 W	High Pressure Sodium	***$42.20***	418	350	***$0.0438***	***$6.41***	***$48.61***
400 W	High Pressure Sodium	***$44.20***	465	350	***$0.0438***	***$7.13***	***$51.33***
1,000 W	High Pressure Sodium	***$81.99***	1100	350	***$0.0438***	***$16.86***	***$98.84***
70 W	Metal Halide	***$31.24***	85	350	***$0.0438***	***$1.30***	***$32.55***
100 W	Metal Halide	***$32.82***	120	350	***$0.0438***	***$1.84***	***$34.66***
150 W	Metal Halide	***$35.55***	180	350	***$0.0438***	***$2.76***	***$38.31***
175 W	Metal Halide	***$36.91***	210	350	***$0.0438***	***$3.22***	***$40.13***
250 W	Metal Halide	***$42.82***	300	350	***$0.0438***	***$4.60***	***$47.41***

(Continued on Sheet No. D-51.01)

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Vice President
Corporate Strategy & Regulatory Affairs

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(Continued from Sheet No. D-51.00)

RATE SCHEDULE NO. E1 (Contd.) **MUNICIPAL STREET LIGHTING RATE**

Luminaire Charges (Contd):

(a) Nominal Lamp Size	(b) Type of Service	(c) Distribution Charge per Lamp per Month	(d) System Wattage	(e) Average Monthly Hours (4200/12)	(f) Energy Charge	(g) Average Energy Cost per Month (d*e*f/1000)	(h) Average Monthly Cost
320 W	Metal Halide	*$47.89*	365	350	*$0.0438*	*$5.59*	*$53.48*
400 W	Metal Halide	*$53.68*	460	350	*$0.0438*	*$7.05*	*$60.73*
1,000 W	Metal Halide	*$97.15*	1050	350	*$0.0438*	*$16.09*	*$113.24*
20 - 29 W	***LED***	*$20.21*	***25***	***350***	*$0.0438*	*$0.38*	*$20.60*
30 - 39 W	LED	*$20.94*	35	350	*$0.0438*	*$0.54*	*$21.48*
40 - 49 W	LED	*$21.67*	45	350	*$0.0438*	*$0.69*	*$22.36*
50 - 59 W	LED	*$22.39*	55	350	*$0.0438*	*$0.84*	*$23.23*
60 - 69 W	LED	*$23.12*	65	350	*$0.0438*	*$1.00*	*$24.11*
70 - 79 W	LED	*$23.84*	75	350	*$0.0438*	*$1.15*	*$24.99*
80 - 89 W	LED	*$24.57*	85	350	*$0.0438*	*$1.30*	*$25.87*
90 - 99 W	LED	*$25.30*	95	350	*$0.0438*	*$1.46*	*$26.75*
100 - 109 W	LED	*$26.02*	105	350	*$0.0438*	*$1.61*	*$27.63*
110 - 119 W	LED	*$26.75*	115	350	*$0.0438*	*$1.76*	*$28.51*
120 - 129 W	LED	*$27.47*	125	350	*$0.0438*	*$1.92*	*$29.39*
130 - 139 W	LED	*$28.20*	135	350	*$0.0438*	*$2.07*	*$30.26*
140 - 149 W	LED	*$28.82*	145	350	*$0.0438*	*$2.22*	*$31.04*
150 - 159 W	LED	*$29.44*	155	350	*$0.0438*	*$2.38*	*$31.81*
160 - 169 W	LED	*$30.06*	165	350	*$0.0438*	*$2.53*	*$32.59*
170 - 179 W	LED	*$30.68*	175	350	*$0.0438*	*$2.68*	*$33.36*
180 - 189 W	LED	*$31.30*	185	350	*$0.0438*	*$2.83*	*$34.14*
190 - 199 W	LED	*$31.93*	195	350	*$0.0438*	*$2.99*	*$34.91*
200 - 209 W	LED	*$32.55*	205	350	*$0.0438*	*$3.14*	*$35.69*
210 - 219 W	LED	*$33.17*	215	350	*$0.0438*	*$3.29*	*$36.47*
220 - 229 W	LED	*$33.80*	225	350	*$0.0438*	*$3.45*	*$37.24*

(Continued on Sheet No. D-51.02)

M.P.S.C. No. 1 - Electric
DTE Electric Company
(Final Order Case No. U-20836)

First Revised Sheet No. D-51.02
Cancels Original Sheet No. D-51.02

(Continued from Sheet No. D-51.01)

RATE SCHEDULE NO. E1 (Contd.) **MUNICIPAL STREET LIGHTING RATE**

Luminaire Charges (Contd):

(a) Nominal Lamp Size	(b) Type of Service	(c) Distribution Charge per Lamp per Month	(d) System Wattage	(e) Average Monthly Hours (4200/12)	(f) Energy Charge	(g) Average Energy Cost per Month (d*e*f/1000)	(h) Average Monthly Cost
230 - 239 W	LED	*$34.42*	235	350	*$0.0438*	*$3.60*	*$38.02*
240 - 249 W	LED	*$35.05*	245	350	*$0.0438*	*$3.75*	*$38.80*
250 - 259 W	LED	*$35.67*	255	350	*$0.0438*	*$3.91*	*$39.58*
260 - 269 W	LED	*$36.30*	265	350	*$0.0438*	*$4.06*	*$40.36*
270 - 279 W	LED	*$36.93*	275	350	*$0.0438*	*$4.21*	*$41.14*
280 - 289 W	LED	*$37.56*	285	350	*$0.0438*	*$4.37*	*$41.92*
290 - 299 W	LED	*$38.18*	295	350	*$0.0438*	*$4.52*	*$42.70*
300 - 309 W	LED	*$38.81*	305	350	*$0.0438*	*$4.67*	*$43.49*
310 - 319 W	LED	*$39.44*	315	350	*$0.0438*	*$4.83*	*$44.27*
320 - 329 W	LED	*$40.07*	325	350	*$0.0438*	*$4.98*	*$45.05*
330 - 339 W	LED	*$40.69*	335	350	*$0.0438*	*$5.13*	*$45.83*
340 - 349 W	LED	*$41.32*	345	350	*$0.0438*	*$5.29*	*$46.61*
350 - 359 W	LED	*$41.95*	355	350	*$0.0438*	*$5.44*	*$47.39*
360 - 369 W	LED	*$42.58*	365	350	*$0.0438*	*$5.59*	*$48.17*
370 - 379 W	LED	*$43.21*	375	350	*$0.0438*	*$5.75*	*$48.95*
380 - 389 W	LED	*$43.83*	385	350	*$0.0438*	*$5.90*	*$49.73*
390 - 399 W	***LED***	*$44.46*	395	350	*$0.0438*	*$6.05*	*$50.51*

Long Span

- For lamp spacing over 120 feet up to 325 feet on the same side of street, add to rate per lamp per year.. $24.48

Semi-Ornamental

- For Semi-Ornamental Systems which employ Ornamental Post Units served from overhead conductors, where such construction is practical, reduce rate per luminaire per year $21.48

Post Charge

- For each increment of $1,000 of investment which exceeds three times the annual revenue at the prevailing rate at the time of installation, add to rate per year**……………………………………..*$79.44***

(Continued on Sheet No. D-52.00)

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M.P.S.C. No. 1 - Electric
DTE Electric Company
(Final Order Case No. U-20836)

Ninth Revised Sheet No. D-52.00
Cancels Eighth Revised Sheet No. D-52.00

(Continued from Sheet No. D-51.02)

RATE SCHEDULE NO. E1 (Contd.) **MUNICIPAL STREET LIGHTING RATE**

Multiple Luminaires on a Single Pole

- For additional luminaire***s*** added to the same pole, ***a*** reduce***d*** rate per luminaire per year on the added luminaire***.***
  Ornamental $97.92
  Ornamental-Lamp spacing over 120 feet $122.40
  Semi-Ornamental $76.56

OPTION II: Street Equipment Owned by Municipality

MONTHLY RATES OPTION II: Overhead and Underground Ornamental Municipality Owned Street Lighting *(*All-night service*)*.

Power Supply Charges:
Capacity Energy Charge: 0.00¢ per kWh for all kWh
Non-Capacity Energy Charge***: 4.38¢*** per kWh for all kWh

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Nominal Lamp Size	Type of Service	Distribution Charge per Lamp per Month	System Wattage	Average Monthly Hours (4200/12)	Energy Charge	Average Energy Cost per Month (d*e*f/1000)	Average Mo Cost
175 W	Mercury Vapor	*$7.70*	210	350	$0.0438	*$3.22*	*$10.91*
250 W	Mercury Vapor	*$10.65*	300	350	$0.0438	*$4.60*	*$15.25*
400 W	Mercury Vapor	*$16.00*	450	350	$0.0438	*$6.90*	*$22.89*
1,000 W	Mercury Vapor	*$37.12*	1060	350	$0.0438	*$16.24*	*$53.37*
70 W	High Pressure Sodium	*$4.96*	95	350	$0.0438	*$1.46*	*$6.41*
100 W	High Pressure Sodium	*$6.00*	135	350	$0.0438	*$2.07*	*$8.07*
250 W	High Pressure Sodium	*$11.25*	305	350	$0.0438	*$4.67*	*$15.92*
360 W	High Pressure Sodium	*$15.09*	418	350	$0.0438	*$6.41*	*$21.50*
400 W	High Pressure Sodium	*$16.49*	465	350	$0.0438	*$7.13*	*$23.61*
1,000 W	High Pressure Sodium	*$37.46*	1100	350	$0.0438	*$16.86*	*$54.31*

- The Energy Policy Act of 2005 states that no Mercury Vapor lamp ballasts may be manufactured or imported after January 1, 2008. As a result, effective January 1, 2008, new Mercury Vapor lamps will no longer be available. Customers with existing Mercury Vapor lamp ballasts will continue to receive service until those luminaires fail. At that time, customers will be given the option of switching to High Pressure Sodium, Metal Halide, LED or retiring the Luminaire.
- **DE-ENERGIZED LIGHTS:** Customers may elect to have any or all luminaires served under this rate disconnected. The charge per luminaire per year, payable in equal monthly installments, shall be 10% of the above yearly rates. A $35.00 charge per luminaire will be made at the time of de-energization and at the time of re-energization.
- **DUSK TO MIDNIGHT SERVICE:** For service to parking lots from dusk to approximately twelve o'clock midnight E.S.T., a discount of 1.060¢ per nominal watt per month will be applied. One control per circuit will be provided.

(Continued on Sheet No. D-53.00)

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(Continued from Sheet No. D-52.00)

RATE SCHEDULE NO. E1 (Contd.) **MUNICIPAL STREET LIGHTING RATE**

OPTION III: Municipally Owned and Maintained Street Lighting System (Unmetered)

HOURS OF SERVICE: For circuits controlled by automatic timing devices, one-half hour after sunset until one-half hour before sunrise. For circuits controlled by photo-sensitive devices, dusk to dawn for approximately 4,200 hours per year.

RATES: Where the municipality owns, operates, cleans and renews the lamps, and the Company's service is confined solely to the supply of electricity from dusk to dawn, the monthly charge of said service shall be a power supply capacity energy charge of 0.00¢ per kilowatthour, a power supply non-capacity charge of ***4.49¢*** per kilowatthour and a distribution charge of ***10.02¢*** per kilowatthour. If it is necessary for the Company to install facilities to provide service for the lamps, the customer will reimburse the Company for these costs. Contract Rider No. 2 charges will also apply.

OPTION III: Municipally Owned and Maintained Street Lighting System (Controlled/Metered)

AVAILABILITY OF SERVICE: Available to governmental agencies desiring controlled nighttime service for primary or secondary voltage energy-only street lighting service where the Company has existing distribution lines available for supplying energy for such service. Luminaires served under any of the Company's other street lighting rates shall not be intermixed with luminaires serviced under this street lighting rate. This rate is not available for resale purposes. Service is governed by the Company's Standard Rules and Regulations.

KIND OF SERVICE:
Secondary Voltage Service: Alternating current, 60 hertz, single-phase 120/240 nominal volt service for a minimum of ten luminaires located within a clearly defined area. Except for control equipment, the customer will furnish, install, own and maintain all equipment comprising the street lighting system up to the point of attachment with the Company's distribution system. The Company will connect the customer's equipment to the Company's lines and supply the energy for operation. All of the customer's equipment will be subject to the Company's review.

Primary Voltage Service: Alternating current, 60 hertz, single-phase or three-phase, primary voltage service for actual demands of not less than 100 kW at each point of delivery. The particular nature of the voltage shall be determined by the Company. The customer will furnish, install, own and maintain all equipment comprising the street lighting system, including control equipment, up to the point of attachment with the Company's distribution system. The Company will supply the energy for operation of the customer's street lighting system.

(Continued on Sheet No. D-54.00)

(Continued from Sheet No. D-53.00)

RATE SCHEDULE NO. E1 (Contd.) **MUNICIPAL STREET LIGHTING RATE**

Primary and Secondary Energy
Full Service Customers:

Power Supply Charge:
Capacity Energy Charge: ***2.603¢*** per kWh for all kWh
Non-Capacity Energy Charge*:* ***2.835¢*** per kWh for all kWh

Delivery System Charge:
4.320¢ per kWh based on the capacity requirements in kilowatts of the equipment assuming 4,200 burning hours per year, adjusted by the ratio of the monthly kWh consumption to the total annual kWh consumption.

Retail Access Service Customers:

Power Supply Charges for Retail Access Service Customers taking Utility Capacity Service from DTE:

Capacity Energy Charge*:* ***2.603¢*** per kWh for all kWh

Delivery System Charge:
4.320¢ per kWh based on the capacity requirements in kilowatts of the equipment assuming 4,200 burning hours per year, adjusted by the ratio of the monthly kWh consumption and the total annual kWh consumption.

At the Company's option, service may be metered and the metered kWh will be the basis for billing. Capacity requirements of lighting equipment shall be determined by the Company from manufacturer specifications, but the Company maintains the right to test such capacity requirements from time to time. In the event that Company tests show capacity requirements other than those indicated in manufacturer specifications, the capacity requirements indicated by Company tests will be used. The customer shall not change the capacity requirements of its equipment without first notifying the Company in writing.

BILLING: Billing will be on a monthly basis.

SURCHARGES AND CREDITS: As approved by the Commission. Power Supply Charges are subject to Section C8.5. Delivery Charges are subject to Section C9.8.

LATE PAYMENT CHARGE: See Section C4.8.

MINIMUM CHARGE: The contract minimum.

CONTRACT TERM: Contracts will be taken for a minimum of two years, extending thereafter from year to year until terminated by mutual consent or upon 12 months' written notice by either party.

RATE SCHEDULE NO. E2 **TRAFFIC AND SIGNAL LIGHTS**

AVAILABILITY OF SERVICE: Available to municipalities or other public authorities, hereinafter referred to as customer, operating lights for traffic regulation or signal lights on streets, highways, airports or water routes, as distinguished from street lighting. Customers desiring service under Rate Schedule No. E2 are free to determine the appropriate light source for their application including incumbent and emerging technologies (including LEDs). Customers must supply adequate documentation of the wattage of the light source that will be subject to the approval of the Company.

HOURS OF SERVICE: 24 hours.

CURRENT, PHASE AND VOLTAGE: Alternating current, single-phase, at 120 volts two-wire.

SERVICE CONNECTIONS: The customer is to furnish and maintain all necessary wiring and equipment, including lamps and lamp replacements, or reimburse the Company therefore, except that the Company will furnish, install and maintain such span poles and messenger cable as may be needed to support the traffic or signal lights of the overhead type. Connections are to be brought to the Company's underground and overhead lighting mains by the customer as directed by the Company, and the final connection to the Company's main is to be made by the Company.

Conversion and/or relocation of existing facilities must be paid for by the customer, except when initiated by the Company. The detailed provisions and schedule of such charges will be quoted upon request.

RATES: Distribution charge of ***2.12¢***, capacity energy charge of ***2.25¢*** and non-capacity energy charge of ***4.11¢*** per month per kilowatthour of the total connected traffic light or signal light load in service for each customer.

Total connected wattage will be reckoned as of the fifteenth of the month. Lamps removed from service before the fifteenth or placed in service on or after the fifteenth will be omitted from the reckoning; conversely, lamps placed in service on or before the fifteenth of the month or removed from service after the fifteenth of the month will be reckoned for a full month. Lamps operated cyclically, on and off, will be reckoned at one-half wattage and billed for a full month. No such reduction of reckoned wattage will be allowed for lamps in service but turned off during certain hours of the day.

The Company may, at its option, install meters and apply a standard metered rate schedule applicable to the service.

SURCHARGES AND CREDITS: As approved by the Commission. See Sections C8.5 and C9.8.

LATE PAYMENT CHARGE: See Section C4.8.

MINIMUM CHARGE: $3.00 per customer per month.

CONTRACT TERM: Open order on a month-to-month basis. However, the Company shall not withdraw service, and the customer shall not substitute another source of service in whole or in part, without twelve months' written notice to the other party.

STANDARD CONTRACT RIDER NO. 1.1 **ALTERNATIVE ELECTRIC METAL MELTING**

APPLICABLE TO:

General Service Rate	Schedule Designation D3
Large General Service Rate	Schedule Designation D4
Interruptible Supply Rate	Schedule Designation D8
Primary Supply Rate	Schedule Designation D11

Customers operating electric furnaces for metal melting or for the reduction of metallic ores and/or electric use consumed in holding operations and taking their supply at any of the above rates and who provide special circuits so that the Company may install necessary meters, may take service under this ***interruptible service*** Rider subject to Section C4.4 - Choice of Rates..

HOURS OF INTERRUPTION*:* All interruptible load served hereunder shall be subject to interruption by the Company in order to maintain system integrity. A System Integrity Interruption Order may be given by the Company when the failure to interrupt will contribute to the implementation of the rules for emergency electrical procedures under Section C3.

NOTICE OF INTERRUPTION*:* The customer shall be provided, whenever possible***; 1)*** notice in advance (generally 1 hour) of probable interruption***; 2)*** the time in which customer must fully reduce load, and***; 3)*** the estimated duration of the interruption. ***The customer shall be provided notice of the actual end time for the system integrity order.***

.

NON-INTERRUPTION PENALTY*:* A customer who does not fully comply with the timing and load reduction prescribed in the Notice of Interruption shall be billed at the rate ***the higher of (i) the rate*** of $50 per kW applied to the highest 60-minute integrated interruptible demand (kW) created during the interruption period ***or (ii) the actual damages incurred by the Company, including any MISO penalties***, in addition to the prescribed monthly rate. In addition, the interruptible contract capacity of a customer who does not fully comply with an interruption order may be immediately reduced by the amount the customer failed to interrupt, unless the customer demonstrates that failure to interrupt was beyond its control.

Electric energy from any facilities, other than the Company's, except for on-site generation installed prior to January 1, 1986, will be used to first reduce the sales on this rider. Standby service will not be billed at this rider, but must be taken under Riders No. 3, No. 5 or No. 6.

RATE PER MONTH:

Full Service Customers:

Power Supply Charges:

Capacity

Energy Charges:

For service at secondary voltage level (less than 4.8 kV)
2.750¢ per kWh for the first 100 hours use of maximum demand
1.039¢ per kWh for the excess

For service at primary voltage level (4.8 kV to 13.2 kV)
2.044¢ per kWh for the first 100 hours use of maximum demand
0.746¢ per kWh for the excess

(Continued on Sheet No. D-58.00)

(Continued from Sheet No. D-57.00)

STANDARD CONTRACT RIDER NO. 1.1 (Contd.) **ALTERNATIVE ELECTRIC METAL MELTING**

For service at subtransmission voltage level (24 kV to 41.6 kV)
1.996¢ per kWh for the first 100 hours use of maximum demand
0***.694¢*** per kWh for the excess

For service at transmission voltage level (120 kV and above)
1.693¢ per kWh for the first 100 hours use of maximum demand
0***.561¢*** per kWh for the excess

Non-Capacity
Energy Charge***:*** 4***.258¢*** per kWh for all kWh

Delivery Charges:
Distribution Charges:
For service at secondary voltage level (less than 4.8 kV)
4.029¢ per kWh for the first 100 hours use of maximum demand
4.029¢ per kWh for the excess

For service at primary voltage level (4.8 kV to 13.2 kV)
1.559¢ per kWh for the first 100 hours use of maximum demand
1.559¢ per kWh for the excess

For service at subtransmission voltage level (24 kV to 41.6 kV)
0***.638¢*** per kWh for the first 100 hours use of maximum demand
0***.638¢*** per kWh for the excess

For service at transmission voltage level (120 kV and above)
0***.204¢*** per kWh for the first 100 hours use of maximum demand
0***.204¢*** per kWh for the excess

Substation Credit: Available to customers where service at sub-transmission voltage (24 kV to 41.6 kV) or higher is required, who provide the on-site substation including all necessary transforming, controlling and protective equipment. A credit of 0.3¢/kWh will be applied to the energy use associated with the first 100 hours use of maximum demand.

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8

Retail Access Service Customers:

Capacity (Only applicable to Retail access Service Customers receiving Utility Capacity Service from DTE Electric)

Energy Charges:
For service at secondary voltage level (less than 4.8 kV)
2.750¢ per kWh for the first 100 hours use of maximum demand
1.039¢ per kWh for the excess

(Continued on Sheet No. D-59.00)

(Continued from Sheet No. D-58.00)

STANDARD CONTRACT RIDER NO. 1.1 (Contd.) **ALTERNATIVE ELECTRIC METAL MELTING**

Retail Access Service Customers (contd.)**:**

For service a primary voltage level (4.8 kV to 13.2 kV)
2.044¢ per kWh for the first 100 hours use of maximum demand
0***.746¢*** per kWh for the excess

For service at subtransmission voltage level (24 kV to 41.6 kV)
1***.996¢*** per kWh for the first 100 hours use of maximum demand
0.***694¢*** per kWh for the excess

For service at transmission voltage level (120 kV and above)
1***.693¢*** per kWh for the first 100 hours use of maximum demand
0***.561¢*** per kWh for the excess

Capacity related surcharges and credits applicable to power supply, excluding PSCR, as approved by the Commission. See Section C8.5.

Delivery Charges:

Distribution Charges:

For service at secondary voltage level (less than 4.8 kV)
4.029¢ per kWh for the first 100 hours use of maximum demand
4.029¢ per kWh for the excess

For service at primary voltage level (4.8 kV to 13.2 kV)
1***.559¢*** per kWh for the first 100 hours use of maximum demand
1***.559¢*** per kWh for the excess

For service at subtransmission voltage level (24 kV to 41.6 kV)
0***.638¢*** per kWh for the first 100 hours use of maximum demand
0***.638¢*** per kWh for the excess

For service at transmission voltage level (120 kV and above)
0***.204¢*** per kWh for the first 100 hours use of maximum demand
0***.204¢*** per kWh for the excess

Substation Credit: Available to customers where service at sub-transmission voltage (24 kV to 41.6 kV) or higher is required, who provide the on-site substation including all necessary transforming, controlling and protective equipment. A credit of 0.3¢/kWh will be applied to the energy use associated with the first 100 hours use of maximum demand.

Surcharges and Credits: As approved by the Commission. See Section C9.8.

(Continued from Sheet No. D-60.00)

STANDARD CONTRACT RIDER NO. 1.2 **ELECTRIC PROCESS HEAT**

APPLICABLE TO:	General Service Rate	Schedule Designation D3
	Large General Service Rate	Schedule Designation D4
	Interruptible Supply Rate	Schedule Designation D8
	Primary Supply Rate	Schedule Designation D11

Customers using electric heat as an integral part of a manufacturing process, or electricity as an integral part of an anodizing, plating or coating process, and taking their supply at any of the above rates and who provide special circuits to accommodate separate metering may take service under this ***interruptible service*** Rider subject to Section C4.4- Choice of Rates.

This Rider is available only to customers who add new load on or after May 1, 1986 to engage in the above described processes and to customers served on R1.1 prior to May 1, 1986 and engaged in the above described processes.

HOURS OF INTERRUPTION*:* All interruptible load served hereunder shall be subject to interruption by the Company in order to maintain system integrity. A System Integrity Interruption Order may be given by the Company when the failure to interrupt will contribute to the implementation of the rules for emergency electrical procedures under Section C3.

NOTICE OF INTERRUPTION*:* The customer shall be provided, whenever possible***; 1)*** notice in advance (generally 1 hour) of probable interruption***; 2)*** the time in which customer must fully reduce load, and***; 3)*** the estimated duration of the interruption. ***The customer shall be provided notice of the actual end time for the system integrity order.***

NON-INTERRUPTION PENALTY: A customer who does not fully comply with the timing and load reduction prescribed in the Notice of Interruption shall be billed at the ***higher of (i) the*** rate of $50 per kW applied to the highest 60-minute integrated interruptible demand (kW) created during the interruption period ***or (ii) the actual damages incurred by the Company, including any MISO penalties,*** in addition to the prescribed monthly rate. In addition, the interruptible contract capacity of a customer who does not fully comply with an interruption order may be immediately reduced by the amount the customer failed to interrupt, unless the customer demonstrates that failure to interrupt was beyond its control.

Electric energy from any facilities, other than the Company's, except for on-site generation installed prior to January 1, 1986, will be used to first reduce the sales on this rider. Standby service will not be billed at this rider, but must be taken under Riders No. 3, No. 5 or No. 6.

RATE PER MONTH:
Full Service Customers:

Power Supply Charges:
Capacity
Energy Charges:
For service at secondary voltage level (less than 4.8 kV)
2.750¢ per kWh for the first 100 hours use of maximum demand
1.039¢ per kWh for the excess

(Continued on Sheet No. D-62.00)

(Continued from Sheet No. D-61.00)

STANDARD CONTRACT RIDER NO. 1.2 (Contd.) **ELECTRIC PROCESS HEAT**

For service at primary voltage level (4.8 kV to 13.2 kV)
2.044¢ per kWh for the first 100 hours use of maximum demand
0***.746¢*** per kWh for the excess

For service at primary voltage level (24 kV to 41.6 kV)
1.996¢ per kWh for the first 100 hours use of maximum demand
0***.694¢*** per kWh for the excess

For service at transmission voltage level (120 kV and above)
1.693¢ per kWh for the first 100 hours use of maximum demand
0***.561¢*** per kWh for the excess

Non-Capacity
Energy Charge***:*** 4***.258¢*** per kWh for all kWh

Delivery Charges:
Distribution Charges:
For service at secondary voltage level (less than 4.8 kV)
4.029¢ per kWh for the first 100 hours use of maximum demand
4.029¢ per kWh for the excess

For service at primary voltage level (4.8 kV to 13.2 kV)
1.559¢ per kWh for the first 100 hours use of maximum demand
1.559¢ per kWh for the excess

For service at subtransmission voltage level (24 kV to 41.6 kV)
0***.638¢*** per kWh for the first 100 hours use of maximum demand
0***.638¢*** per kWh for the excess

For service at transmission voltage level (120 kV and above)
0***.204¢*** per kWh for the first 100 hours use of maximum demand
0***.204¢*** per kWh for the excess

Substation Credit: Available to customers where service at sub-transmission voltage (24 kV to 41.6 kV) or higher is required, who provide the on-site substation including all necessary transforming, controlling and protective equipment. A credit of 0.3¢/kWh will be applied to the energy use associated with the first 100 hours use of maximum demand.

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

(Continued on Sheet No. D-63.00)

(Continued from Sheet No. D-62.00)

STANDARD CONTRACT RIDER NO. 1.2 (Contd.) **ELECTRIC PROCESS HEAT**

Retail Access Service Customers:

Capacity (Only applicable to Retail Access Service Customers receiving Utility Capacity Service from DTE Electric)

Energy Charges:

For service at secondary voltage level (less than 4.8 kV)
2.750¢ per kWh for the first 100 hours use of maximum demand
1.039¢ per kWh for the excess

For service at primary voltage level (4.8 kV to 13.2 kV)
2.044¢ per kWh for the first 100 hours use of maximum demand
0***.746¢*** per kWh for the excess

For service at subtransmission voltage level (24 kV to 41.6 kV)
1.996¢ per kWh for the first 100 hours use of maximum demand
0***.694¢*** per kWh for the excess

For service at transmission voltage level (120 kV and above)
1***.693¢*** per kWh for the first 100 hours use of maximum demand
0***.561¢*** per kWh for the excess

Capacity related surcharges and credits applicable to power supply, excluding PSCR, as approved by the Commission. See Section C8.5.

Delivery Charges:
Distribution Charges:

For service at secondary voltage level (less than 4.8 kV)
4.029¢ per kWh for the first 100 hours use of maximum demand
4.029¢ per kWh for the excess

For service at primary voltage level (4.8 kV to 13.2 kV)
1.559¢ per kWh for the first 100 hours use of maximum demand
1.559¢ per kWh for the excess

For service at subtransmission voltage level (24 kV to 41.6 kV)
0***.638¢*** per kWh for the first 100 hours use of maximum demand
0***.638¢*** per kWh for the excess

For service at transmission voltage level (120 kV and above)
0***.204¢*** per kWh for the first 100 hours use of maximum demand
0***.204¢*** per kWh for the excess

(Continued on Sheet No. D-64.00)

(Continued from Sheet No. D-70.00)

STANDARD CONTRACT RIDER NO. 3 (Contd.) **PARALLEL OPERATION AND STANDBY SERVICE AND STATION POWER STANDBY SERVICE**

DEFINITIONS (contd):

MAINTENANCE PERIODS (contd):

(e) If there is a substantial change in circumstances which make the agreed upon schedule impractical for either party, the other party upon request shall make reasonable efforts to adjust the schedule in a manner that is mutually agreeable.

WAIVERS AND LIMITS FOR GENERATION RESERVATION FEE AND DAILY DEMAND CHARGES:

For customers taking supplemental service on rate schedules D4, D11, D6.2 or D8, the following waivers apply:

If the total of daily demand charges for the month is less than the monthly generation reservation fee, then the daily demand charges will be waived for that month.

If the total of daily demand charges for the month is greater than the monthly generation reservation fee, then the generation reservation fee will be waived for that month.

Waivers and limits for energy-only rates:

For customers taking supplemental service on energy-only rates for the entire billing cycle, schedules D3, or D3.3, the following applies.

If the total of daily demand charges for the month is less than the monthly generation reservation fee, then the daily demand charges will be waived for that month.

If the total of daily demand charges for the month is greater than the monthly generation reservation fee, then the daily demand charges will be waived for that month provided that the supplemental rate continues as an energy-only rate. If not, then the total of daily demand charges for the month will be charged and the generation reservation fee for the month will be waived..

RATES:

Power Supply Charges:

Capacity

Monthly Generation Reservation Fee:

$0***.48*** times the standby contract capacity in kW, per month.

The daily on-peak backup demand charge is $1***.32*** per kW per day during periods other than maintenance periods as defined below.

The daily on-peak backup demand charge is $0***.66*** per kW per day during maintenance periods as defined below.

(Continued from Sheet No. D-72.00)

(Continued from Sheet No. D-72.00)

STANDARD CONTRACT RIDER NO. 3 (Contd.) **PARALLEL OPERATION AND STANDBY SERVICE AND STATION POWER STANDBY SERVICE**

RATES (contd):

Energy Charge:

For customers served on supplemental rate schedules D3, D3.2 and D3.3, the energy charge will be the applicable power supply energy charge specified in the customer's supplemental rate.

The energy as stated herein, is also subject to provisions of the PSCR clause and other Surcharges and Credits Applicable to Power Supply as approved by the Commission. See Section C8.5.

Non-Capacity

Monthly Generation Reservation Fee:

$0.12 times the standby contract capacity in kW, per month.

The daily on-peak backup demand charge is $0***.32*** per kW per day during periods other than maintenance periods as defined below.

The daily on-peak backup demand charge is $0.***16*** per kW per day during maintenance periods as defined below.

Energy Charge:

An energy charge for back-up and maintenance power will be charged based on standby contract capacity less the output toward internal load of the customer's generator, but not less than zero. For customers served on supplemental rate schedules D4, D11, D6.2 and D8, the energy charge will be ***4.740¢*** per kWh, plus appropriate power supply credits, including but not limited to an off-peak credit of 1.00¢ per kWh, and voltage level credits of 0.***060¢*** per kWh for subtransmission and 0.***134¢*** per kWh for transmission. For customers served on supplemental rate schedules D3, D3.2 and D3.3, the energy charge will be the applicable power supply energy charge specified in the customer's supplemental rate.

The energy as stated herein, is also subject to provisions of the PSCR clause and other Surcharges and Credits Applicable to Power Supply as approved by the Commission. See Section C8.5.

Delivery Charges:

Service Charge:

$70 per customer per month for customers served at primary voltage.
$375 per customer per month for customers served above primary voltage.
$***70*** per customer per month for customers served at secondary voltages.

Distribution Charge:

Distribution charges will be as follows:

$***5.33*** per kW at primary voltage applied to the standby contract capacity
$***2.21*** per kW at subtransmission voltage applied to the standby contract capacity
$***0.93*** per kW at transmission voltage applied to the standby contract capacity

(Continued on Sheet No. D-73.00)

(Continued from Sheet No. D-72.00)

STANDARD CONTRACT RIDER NO. 3 (Contd.) **PARALLEL OPERATION AND STANDBY SERVICE AND STATION POWER STANDBY SERVICE**

RATES (contd):

Distribution Charge:

For service provided in conjunction with a secondary voltage base rate the Delivery Charge will be the greater of $***10.80*** per kW applied to standby contract capacity or ***4.320¢***/kWh applied to all standby energy delivered.

Substation Credit: Available to customers served at subtransmission voltage level (24 to 41.6 kW) or higher who provide the on-site substation including all necessary transforming, controlling, and protective equipment. A credit of $.30 per kW shall be applied to the distribution demand charge per kW of standby capacity. An additional credit of 0.040¢ per kWh of standby delivered will be given where the service is metered on the high voltage side of the transformer.

Surcharges and Credits Applicable to Delivery Service: As approved by the Commission. See Section C9.8.

ADJUSTMENT OF PRIOR RATCHETS: When a customer takes standby service under Rider No. 3, the setting or the increasing or decreasing of standby contract capacity will affect the existing ratchet levels on the supplemental rate as follows:

(a) An amount in kW equal to the initial standby contract capacity (or to the increase or decrease) will be subtracted from (or subtracted from or added to) the existing ratcheted maximum demand level for customers on supplemental rates D6.2 and D8 and D11.

(b) An amount in kW equal to 65% of the initial standby contract capacity (or of the increase or decrease) will be subtracted from (or subtracted from or added to) the existing ratcheted on-peak billing demand level for customers on supplemental rates D4, D6.2 and D8 and D11.

LATE PAYMENT CHARGE: See Section C4.8.

SCHEDULE OF ON-PEAK HOURS: See Section C11.

POWER FACTOR CLAUSE: The rates and charges under this tariff are based on the customer maintaining a power factor of not less than 85% lagging. Customers are responsible for correcting power factors less than 70% at their own expense. The size, type and location of any power factor correction equipment must be approved by the Company. Such approval will not be unreasonably withheld. A penalty will be applied to the total amount of the monthly billing for supplemental and standby service for power factor below 85% lagging in accordance with the table in Power Factor Determination, Section C12. The penalty will not be applied to the on-peak billing demand ratchet nor to the minimum contract demand of the supplemental rate, but will be applied to metered quantities.

(Continued on Sheet No. D-73.01)

(Continued from Sheet No. D-73.01)

STANDARD CONTRACT RIDER NO. 3 (Contd.) **PARALLEL OPERATION AND STANDBY SERVICE AND STATION POWER STANDBY SERVICE**

STATION POWER STANDBY SERVICE

SERVICE UNDER THIS PROVISION BECOMES EFFECTIVE APRIL 1, 2014

STATION POWER STANDBY SERVICE: Available to customers with generation facilities that are located within the Company's retail service territory and that are interconnected to ITC Transmission. The power supply requirements necessary to maintain and operate the generating facility that are normally served by the facility's on-site generation but which instead are provided by the facility's taking power through its transmission interconnection must be provided under the station Power Standby Service provisions of this rider.

APPLICABLE TO: General Service Rate Schedule Designation D3

HOURS OF SERVICE: 24 hours, subject to interruption by agreement, or by advance notice.

CONTRACT CAPACITY: Customers shall initially contract for a specified capacity in kilowatts sufficient to meet expected maximum requirements. Any single reading of the demand meter or aggregation of demand meters recording inflow to the facility in any month that exceeds the contract capacity then in effect shall become the new contract capacity.

METERING REQUIREMENTS: All customers taking service under this rider must install the necessary equipment to permit metering. The Company will supply the metering equipment. Service to the customer under this Rider will be metered with demand-recording equipment. Any equipment installed by the customer necessary to accommodate the Company's metering equipment must be approved by the Company and must be compatible with the Company's Meter Data Acquisition System.

RATES:

Power Supply:

Non-Capacity

Station Power Energy Service will be priced on the basis of the real time MISO locational hourly marginal energy price for the Company-appropriate load node. In additional to the MISO locational hourly marginal energy price the following charges will also apply:

***0.756*¢**/kWh for MISO network transmission costs and MISO energy market costs plus,
An administrative charge of ***0.724*¢**/kWh plus,
Surcharges and Credits Applicable to Power Supply, excluding PSCR, as approved by the Commission. See Section C8.5

Service Charge:

Primary Service Charge:	$70 per month
Subtransmission and Transmission Service Charge:	$375 per month

(Continued on Sheet No. D-73.03)

STANDARD CONTRACT RIDER NO. 7 **GREENHOUSE LIGHTING SERVICE**

APPLICABLE TO:	General Service Rate	Schedule Designation D3
	Large General Service Rate	Schedule Designation D4

Available on an optional basis to customers desiring high intensity discharge lighting service for greenhouses or other environmentally controlled growing facilities as a daylight supplement. All lighting on this rider shall be separately metered. The customer will furnish, install, own, and maintain all equipment comprising the lighting system. No other device may be connected to this circuit except for controls, lighting and associated equipment.

HOURS OF SERVICE: Dusk to dawn service for circuits controlled by photo-sensitive or clock timing devices.

CURRENT, PHASE AND VOLTAGE: Alternating current, 60 hertz, single phase, nominally at 120/240 volts, three-wire; or three-phase, four-wire, Y connected at 208Y/120 volts; or under certain conditions three-phase, four-wire, Y connected at 480Y/277 volts.

RATE PER MONTH:

Full Service Customers:

Power Supply Charge:
Capacity Energy Charge: ***2.175¢*** per kWh for all kWh
Non-Capacity Energy Charge: ***2.345¢*** per kWh for all kWh

Delivery Charges:
Service Charge: $1.95 per month
Distribution Charge: ***4.320¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

Retail Access Service Customers:

Power Supply Charge for Retail Access Service Customers taking Utility Capacity Service for DTE:
Capacity Energy Charge: ***2.175¢*** per kWh for all kWh

Delivery Charges:
Service Charge: $1.95 per month
Distribution Charge: ***4.320¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Section C9.8.

(Continued on Sheet No. D-85.00)

STANDARD CONTRACT RIDER NO. 8 **COMMERCIAL SPACE HEATING**

APPLICABLE TO:	General Service Rate	Schedule Designation D3
	Large General Service Rate	Schedule Designation D4

Available on an optional basis to customers desiring service for commercial space conditioning furnished through separately metered circuits to which no other device except electric space heating, water heating, air conditioning, or humidity control equipment may be connected and provided that all of the space heating must be either total electric or an electric heat pump supplemented by a fossil fuel furnace installed on a permanent basis. The customer must provide special circuits, the design and method of installation of which are approved by the Company as adapted to this service.

Electric space heating under the terms of this rider will be considered to include heating by light systems, provided the primary means of space heating at the time of maximum requirements will be furnished by the lighting system, with the balance furnished by supplementary electric heating equipment. After June 15, 1970, under the authority of the Commission in Case U-3189, service to facilities which heat by lighting is not available for premises not previously qualified for service hereunder.

RATE PER MONTH:

Full Service Customers:

Power Supply Charge:

Capacity Energy Charge: ***5.766¢*** per kWh for all kWh, except that during the billing months of November through May, usage in excess of 1,000 kWh per month shall be billed at ***1.912¢*** per kWh.

Non-Capacity Energy Charge: ***3.589¢*** per kWh

Delivery Charges:

Service Charge: $11.25 per month
Distribution Charge: ***4.320¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8.

Retail Access Service Customers:

Power Supply Charge for Retail Access Service Customers taking Utility Capacity service from DTE***:***

Capacity Energy Charge: ***5.766¢*** per kWh for all kWh, except that during the billing months of November through May, usage in excess of 1,000 kWh per month shall be billed at ***1.912¢*** per kWh.

Delivery Charges:

Service Charge: $11.25 per month
Distribution Charge: ***4.320¢*** per kWh for all kWh

Surcharges and Credits: As approved by the Commission. See Section C9.8.

(Continued on Sheet No. D-87.00)

(Continued from Sheet No. D-86.00)

STANDARD CONTRACT RIDER NO. 8 (Contd.) **COMMERCIAL SPACE HEATING**

LATE PAYMENT CHARGE: See Section C4.8.

MINIMUM CHARGE: The Service Charge plus any applicable per meter per month surcharges.

CONTRACT TERM: This rate is made effective by a rider modifying the contract form prescribed for one of the applicable filed rates listed above. The contract term is co-extensive with the contract term of the applicable filed rate under which service is being taken.

INSULATION STANDARDS FOR ELECTRIC HEATING: See Section C4.9.

OPTIONAL PROVISION FOR CERTAIN COMMON AREA ACCOUNTS: Electric heating and common area usage of apartment or condominium accounts supplied through a single meter and billed under the terms of the Domestic Space Heating Rate D2 prior to September 28, 1978 may be billed under this provision without the necessity of separate metering if an initial block of kilowatthours is billed at the current General Service Rate D3. This initial block of kilowatthours will be calculated each November by averaging the usage during the previous billing months of June through October.

Full Service Customers:

Usage in excess of the initial block of kilowatthours per month shall be billed at a power supply capacity charge of ***5.766¢*** and a non-capacity charge of ***3.589¢*** per kilowatthour during the billing months of June through October, and a capacity charge of ***1.912¢*** and a non-capacity charge of ***3.589¢*** per kilowatthour during the billing months of November through May. A Distribution charge of ***4.320¢*** per kWh for all kWh shall also be applied. The only service charge to be billed to a customer utilizing this provision will be the D3 service charge.

Retail Access Service Customers:

Power Supply Charge for Retail Access Service Customers taking Utility Capacity Service from DTE:

For Retail Access customers taking capacity service from DTE, usage in excess of the initial block of kilowatthours per month shall be billed at a power supply capacity charge of ***5.766¢*** per kilowatthour during the billing months of June through October, and a power supply capacity charge of ***1.912¢*** per kilowatthour during the billing months of November through May.

For all retail access customers, usage in excess of the initial block of kilowatthours per month shall be billed a distribution charge of ***4.320¢*** per kWh for all kWh.

SUPPLEMENTAL SPACE HEATING PROVISION: This provision is available to customers taking service under the General Service Rate D3 or the Large General Service Rate D4 who purchase energy for a minimum of 10 kW of supplemental, permanently installed, electric space heating equipment. To qualify for this provision, a customer must certify in writing the amount of permanently installed space heating equipment, subject to inspection at the option of the Company, and have the said equipment on separately metered circuits to which no other device is connected. Section C4.9, Insulation Standards for Electric Heating, will not apply to this provision.

STANDARD CONTRACT RIDER NO. 10 **INTERRUPTIBLE SUPPLY RIDER**

AVAILABILITY OF SERVICE: Available to Primary Supply Rate (D11) customers desiring interruptible service for a total of not less than 50,000 kilowatts of contracted interruptible service at a single location. The total contracted interruptible capacity on this tariff is limited to 400,000 kilowatts. This rider is effective for service rendered on and after January 1, 1993.

The contracted interruptible capacity limit on this tariff shall be increased to 525,000 kilowatts in 1994 and 650,000 kilowatts in 1995. The increase shall apply to customers desiring interruptible service for a total of not less than 5,000 kilowatts of contracted interruptible service at a single location.

In the event the total contracted interruptible capacity is less than the approved limit specified above, the Company may offer the remaining capacity, to otherwise eligible customers willing to contract for less than the minimum contract capacity amounts specified above.

CURRENT, PHASE AND VOLTAGE: Alternating current, three-phase, nominally at 4,800, 13,200, 24,000, 41,570 or 120,000 volts at the option of the Company. For definition of customer voltage level, see Section C13.

HOURS OF INTERRUPTION*:* All interruptible load served hereunder shall be subject to interruption by the Company in order to maintain system integrity. A System Integrity Interruption Order may be given by the Company when the failure to interrupt will contribute to the implementation of the rules for emergency electrical procedures under Section C3.

NOTICE OF INTERRUPTION*:* The customer shall be provided, whenever possible***;1)*** notice in advance (generally1 hour) of probable interruption***; 2)*** the time in which customer must fully reduce load, and***; 3***) the estimated duration of the interruption. ***The customer shall be provided notice of the actual end time for the system integrity order.***

NON-INTERRUPTION PENALTY*:* A customer who does not fully comply with the timing and load reduction prescribed in the Notice of Interruption shall be billed at the ***higher of (i) the*** rate of $50 per kW applied to the highest 60-minute integrated interruptible demand (kW) created during the interruption period ***or (ii) the actual damages incurred by the Company, including any MISO penalties,*** in addition to the prescribed monthly rate. In addition, the interruptible contract capacity of a customer who does not fully comply with an interruption order may be immediately reduced by the amount the customer failed to interrupt, unless the customer demonstrates that failure to interrupt was beyond its control.

If the customer fails to curtail load as requested, the Company reserves the right to interrupt the customer's total separately metered load on this rider, or total plant if not separately metered, and the customer will be billed at the rate of $50 per kW per instance applied to contract capacity.

CONTRACT CAPACITY: Customers shall contract for a specified capacity in kilowatts sufficient to meet the customers' maximum interruptible requirements, but not less than the minimum contract capacity amounts, specified above. Demand/Energy in excess of the contracted load level will be billed under the applicable Primary Supply Rate. The contract capacity shall not be decreased during the term of the contract and subsequent renewal periods as long as service is required unless there is a specific reduction in connected load. Capacity disconnected from service under this rider shall not be subsequently served under any other tariff during the term of this contract and subsequent renewal periods.

(Continued on Sheet No. D-91.00)

(Continued from Sheet No. D-90.00)

STANDARD CONTRACT RIDER NO. 10 (Contd.) **INTERRUPTIBLE SUPPLY RIDER**

RATE PER MONTH:

Full Service Customers:

Power Supply Charges:

Non-Capacity**:**
The Energy charge will be the real time MISO locational hourly marginal energy price for the DTE Electric-appropriate load node. In addition to the MISO locational hourly marginal energy price the following charges will also apply:

0.756¢/kWh for MISO network transmission costs and MISO energy market costs plus,
An administrative charge of ***0.0724***¢/kWh plus,
A voltage level service adder of 1***.56***% for transmission, ***3.73***% for subtransmission and ***5.50%*** for primary.

Delivery Charges:
Primary Service Charge: $70 per month
Subtransmission and Transmission Service Charge: $375 per month
Distribution Charges:
For primary service (less than 24kV) $***5.33*** per kW of maximum demand
For service at subtransmission voltage (24 to 41.6 kV) $***2.21*** per kW of maximum demand
For service at transmission voltage (120 kV and above) $0***.93*** per kW of maximum demand.

Substation Credit: Available to customers where service at subtransmission voltage level or higher is required, who provide the on-site substation including all necessary transforming, controlling and protective equipment. A credit of $.30 per kW of maximum demand shall be applied to the maximum demand charge. A credit of .040¢ per kWh shall be applied to the energy charge where the service is metered on the primary side of the transformer.

Surcharges and Credits: As approved by the Commission. See Sections C8.5 and C9.8

(Continued on Sheet No. D-92.00)

(Continued from Sheet No. D-91.00)

STANDARD CONTRACT RIDER NO. 10 (Contd.) **INTERRUPTIBLE SUPPLY RIDER**

Retail Access Service Customers:

Delivery Charges:

Primary Service Charge: $70 per month
Subtransmission and Transmission Service Charge: $375 per month
Distribution Charges:
For primary service (less than 24kV) $***5.33*** per kW of maximum demand
For service at subtransmission voltage (24 to 41.6 kV) $***2.21*** per kW of maximum demand
For service at transmission voltage (120 kV and above) $0***.93*** per kW of maximum demand.

Substation Credit: Available to customers where service at subtransmission voltage level or higher is required, who provide the on-site substation including all necessary transforming, controlling and protective equipment. A credit of $.30 per kW of maximum demand shall be applied to the maximum demand charge. A credit of .040¢ per kWh shall be applied to the energy charge where the service is metered on the primary side of the transformer.

Surcharges and Credits: As approved by the Commission. See Section C9.8.

LATE PAYMENT CHARGE: See Section C4.8.

MINIMUM CHARGE: The Service Charge plus the Maximum Demand Charge, plus all applicable energy charges plus any applicable per meter per month surcharge.

MAXIMUM DEMAND: The maximum demand shall be the highest 30-minute demand created during the previous 12 billing months, including the current month but not less than 50% of the contract capacity. This clause is applicable to each voltage level served.

POWER FACTOR CLAUSE: Shall be the Power Factor Clause as defined in the Primary Supply Rate (D11).

SPECIAL TERMS AND CONDITIONS: Customer-owned equipment must be operated so the voltage fluctuations on the primary distribution system of the Company shall not exceed permissible limits.

The customer will own and maintain the necessary equipment to separate the interruptible load from the firm power load. This equipment must meet the Company standards. The customer must also provide space for the separate metering of the interruptible load.

The interruptible load shall not be served from firm power circuits at any time. Violations of this provision will result in a charge of $50 per kilowatt per month applied to the interruptible load determined to have been served from firm power circuits.

(Continued on Sheet No. D-93.00)

STANDARD CONTRACT RIDER NO. 18 **DISTRIBUTED GENERATION PROGRAM**

AVAILABILITY:
This Rider can be attached to any metered tariff, excluding riders, unless otherwise noted on the applicable metered tariff**.** The Distributed Generation Program is offered as authorized by 2008 PA 295, as amended by 2016 PA 342, 1939 PA 3, as amended by 2016 PA 341, Section (6) (a) (14), and the Commission in Case No. U-20162.

The Distributed Generation Program is available for eligible Distributed Generation customers on and after May 9, 2019.

A customer participating in a net metering program approved by the Commission before May 9, 2019 shall have the option to take service under this tariff at the time service under the terms and conditions of the previous net metering program terminates in accordance with MCL 463.0183(1).

The Distributed Generation Program is voluntary and available on a first come, first served basis for new customer participants or existing customer participants increasing their aggregate generation. The combined net metering (Rider 16) and Distributed Generation Program size is equal to ***1.***0% of the Company's average instate peak load for Full- Service customers during the previous 5 calendar years. Within the Program capacity, 0.5% is reserved for Category 1 Distributed Generation customers, 0.25% is reserved for Category 2 Distributed Generation customers and 0.25% is reserved for Category 3 Distributed Generation customers. The Company shall notify the Commission upon the Program reaching capacity in any Category.

If an existing customer who participates on Rider 16 increases their aggregate generation following ***the effective date of this rider***, then all generation on site will be subject to the terms and conditions of this tariff.

CHARACTER OF SERVICE:
As specified under the applicable Base Rate. The term Base Rate refers to the Rate Schedule under which the Customer takes service and that this Rider is associated with.

DISTRIBUTED GENERATION DEFINITIONS

(1) A Category 1 distributed generation customer has one or more Eligible Electric Generators with an aggregate nameplate capacity of 20 kW or less that use equipment certified by a nationally recognized testing laboratory to IEEE 1547-2018 testing standards and is in compliance with UL 1741-SA and located on the customer's premises and metered at a single point of contact.

(2) A Category 2 distributed generation customer has one or more Eligible Electric Generators with an aggregate nameplate capacity greater than 20 kW but not more than 150 kW that use equipment certified by a nationally recognized testing laboratory to IEEE 1547-2018 testing standards and is in compliance with UL 1741-SA and located on the customer's premises and metered at a single point of contact.

(Continued on Sheet No. D-113.00)

(Continued from Sheet D-113.00)

STANDARD CONTRACT RIDER NO. 18 (contd.) **DISTRIBUTED GENERATION PROGRAM**

CUSTOMER ELIGIBILITY

In order to be eligible to participate in the Distributed Generation Program, customers must generate a portion or all of their own retail electricity requirements with an Eligible Electric Generator which utilizes a Renewable Energy Resource, as defined above.

A customer's eligibility to participate in the Distributed Generation Program is conditioned on the full satisfaction of any payment term or condition imposed on the customer by pre-existing contracts or tariffs with the Company, including those imposed by participation in the Distributed Generation Program, or those required by the interconnection of the customer's Eligible Electric Generator to the Company's distribution system.

CUSTOMER BILLING – CATEGORY 1, 2 AND 3 CUSTOMERS
Inflow

(a) Full Service Customers

The customer will be billed according to their retail rate schedule, plus surcharges, and Power Supply Cost Recovery (PSCR) Factor on metered Inflow for the billing period or time-based pricing period.

(b) Retail Open Access Customers

The customer will be billed as stated on the customer's Retail Open Access Rate Schedule on metered Inflow for the billing period or time based pricing period.

Outflow
The customer will be credited on Outflow for the billing period or time-based pricing period. The credit shall be applied to the current billing month and shall be used to offset power supply and PSCR charges on that bill. The credit shall not offset any delivery charges or other surcharges. Any excess credit not used will be carried forward to subsequent billing periods. Unused Outflow Credit from previous months will be applied to the current billing month, if applicable, to offset the power supply component and PSCR components on the customer's bill. Outflow Credit is nontransferrable**.**

(1) Full Service Customers
Power Supply Credit for Outflow***:***

Customers will be credited for each kWh of Outflow according to the non-transmission power supply rates shown below, plus the PSCR factor***. For the demand-based outflow credits shown below, outflow demand will be determined by the average of on-peak demand (kW) during the billing period.***

(Continued on Sheet No. D-115.00)

M.P.S.C. No. 1 - Electric
DTE Electric Company
(Final Order Case No. U-20836)

Second Revised Sheet No. D-115.00
Cancels First Revised Sheet No. D-115.00

(Continued from Sheet D-114.00)

STANDARD CONTRACT RIDER NO. 18 (contd.) **DISTRIBUTED GENERATION PROGRAM**

Rate Schedule	Outflow Credit $ per kWh			
Residential				
D1/D1.6 Residential	First 17 kWh per Day: ***$0.08349***	Excess: ***$0.10291***		
D1.1 Int. Air	Summer: ***$0.07322***	Winter: ***$0.04161***		
D1.2 Time-of-Day	Summer On-Peak: ***$0.15138***	Summer Off-Peak: ***$0.05096***	Winter On-Peak: ***$0.12788***	Winter Off-Peak: ***$0.04897***
D1.7 Time-of-Day	Summer On-Peak: ***$0.13516***	Summer Off-Peak: ***$0.04477***	Winter On-Peak: ***$0.05840***	Winter Off-Peak: ***$0.04589***
D1.8 Dynamic Peak Pricing	***Critical Peak: $0.95000***	***On-Peak: $0.16062***	***Mid-Peak: $0.08889***	***Off-Peak: $0.04587***
D1.9 Elec. Vehicle	On-Peak: ***$0.17036***	Off-Peak: ***$0.04259***		
D1.11 Stan. TOU	***June-Sept On-Peak***: ***$0.14101***	***June-Sept Off-Peak***: ***$0.08574***	***Oct-May On-Peak***: ***$0.09873***	***Oct-May Off-Peak***: ***$0.08574***
D2 Elec Space Heat	Summer First 17 kWh per Day: ***$0.08119***	Summer Excess: ***$0.09838***	Winter First 20 kWh per Day: ***$0.06481***	Winter Excess: ***$0.05043***
D5 Water Heat	All kWh: ***$0.04811***			
Secondary				
D1.1 Int. Air	Summer: ***$0.07467***	Winter: ***$0.05295***		
D1.7 Time-of-Day	Summer On-Peak: ***$0.05716***	Summer Off-Peak: ***$0.04098***	Winter On-Peak: ***$0.04503***	Winter Off-Peak: ***$0.04503***
D1.8 Dynamic Peak Pricing	***Critical Peak: $1.25778***	***On-Peak: $0.16149***	***Mid-Peak: $0.08767***	***Off-Peak: $0.04462***
D1.9 Elec. Vehicle	On-Peak: ***$0.17036***	Off-Peak: ***$0.04259***		
D3 General Service	All kWh: ***$0.07913***			
D3.2 Secondary Education	All kWh: ***$0.07270***			

Issued ________________
M. Bruzzano
Vice President
Corporate Strategy & Regulatory Affairs

Detroit, Michigan

Effective for service rendered on
and after _____________, 2022

Issued under authority of the
Michigan Public Service Commission
dated ________________
in Case No. U-20836

D3.3 Interruptible General Service	All kWh: ***$0.06611***			
D4 Large General Service	Demand: ***$16.12***	First 200 kWh per kW: ***$0.03900***	Excess: ***$0.03010***	
D5 Water Heat	All kWh: ***$0.04659***			
E1.1 Eng. St. Ltg.	All kWh: ***$0.05438***			

(Continued on Sheet No. D-116.00)

(Continued from Sheet D-115.00)

STANDARD CONTRACT RIDER NO. 18 (contd.) **DISTRIBUTED GENERATION PROGRAM**

Rate Schedule	Outflow Credit $ per kWh			
Primary				
D11 Primary Supply	Demand:	On-Peak:	Off-Peak:	
Primary	***$16.41*** per kW	***$0.04148***	***$0.03148***	
Subtransmission	***$16.09*** per kW	***$0.04088***	***$0.03088***	
Transmission	***$15.73*** per kW	***$0.04014***	***$0.03014***	
D6.2 Primary Educational Institution	Demand:	On-Peak:	Off-Peak:	
Primary	***$13.27*** per kW	***$0.04152***	***$0.03852***	
Subtransmission	***$13.00*** per kW	***$0.04082***	***$0.03782***	
Transmission	***$12.71*** per kW	***$0.03997***	***$0.03697***	
D8 Interruptible Supply	Demand:	On-Peak	Off-Peak	
Primary	***$9.84*** ***per kW***	***$0.04148***	***$0.03148***	
Subtransmission	***$9.65*** ***per kW***	***$0.04088***	***$0.03088***	
Transmission	***$9.44*** ***per kW***	***$0.04014***	***$0.03014***	
D10 All Electric School	Summer: ***$0.09289***	Winter: ***$0.07276***		

(1) Retail Open Access Customers

The Outflow Credit will be determined by the Retail Service Supplier. For customers taking capacity service from the Company, the capacity outflow credit shall be the appropriate capacity rate(s) from the customer's rate schedule.

APPLICATION FOR SERVICE

In order to participate in the Distributed Generation Program, a customer shall submit completed Interconnection and Distributed Generation Program Applications, including the application fee of $50 to the Company.

The Distributed Generation Program application fee is waived if the customer is transitioning from the Net Metering Program.

If a customer does not act or correspond on an application for over 6 months, when some action is required by the customer, the application may ***be*** voided by the Company.

(Continued on Sheet No. D-116.01)

STANDARD CONTRACT RIDER NO. 21 **UTILITY INVESTMENT TARIFF FOR ELECTRIC BUS BATTERIES AND CHARGING STATIONS**

1 ***AVAILABILITY OF SERVICE : Eligible on an optional and voluntary basis to any Company customer operating diesel buses who takes service under any Company rate schedule. Service is available at the Company's discretion.***

2 ***REQUIREMENTS OF PARTICIPATION: To participate in the Program, a customer must:***

2.1 ***Provide the Company with an Electric Bus Procurement Plan as described in Section 3 and agree to pay the Company's fee, if any, for reviewing the cost effectiveness analysis as described in Section 3.4.***

2.3 ***Assure disassembly and recycling of bus components associated with diesel fuel use in buses to be replaced.***

2.4 ***Assure that charging equipment will include customer override functionality that allows customer to charge at times outside the limits used in the cost effectiveness analysis described in Section 3.***

2.5 ***Accept the terms of this tariff and associated Upgrade Procurement Agreement (Agreement) described in Section 4.***

3 ***ELECTRIC BUS PROCUREMENT PLANS: The Company or its agent will review an Upgrade Procurement Plan (Plan) for electric buses that includes a cost effectiveness analysis of procuring electric buses and charging stations (Upgrades) compared with diesel buses. Costs and benefits considered must include all customer costs and savings associated with procurement and operation, including electricity on an available rate schedule and annual diesel fuel costs, charging stations, maintenance, and planned replacements of batteries during the cost-recovery period. The Company will approve any Plan for electric buses found to be cost effective for the customer based on the Participant Cost Test and for the Company based on the Utility Cost Test. The Company costs must include cost of capital and cost paid for the Upgrades. The Company's cost recovery in the proposed Upgrade Procurement Plan will be limited to an amount equal to 80% of the estimated savings resulting from the Upgrades, providing the Company's investment amount and cost recovery meets the parameters in Sections 3.2 and 6.***

3.1 ***INCENTIVE PAYMENT: The Company may make an incentive payment toward an electric bus procurement project that is less than or equal to the value of the replacement of a diesel bus with an all-electric bus to the Company based on the Utility Cost Test. This value would be in addition to any rebate to any customer replacing a diesel bus with an all-electric bus.***

3.2 ***NET SAVINGS: Approved Plans and Company investment amounts will be limited to those for which the annual Program Service Charges (Service Charges) as described in Section 6, including program fees and the Company's cost for capital, are no greater than 80% of the customer's estimated annual savings from net reduction in Customers' annual operating costs based on current fuel prices and rates for electricity and any documented reduced operations and maintenance costs. If any special rate is used to calculate Customer savings, the Plan must specify the conditions of such rate. In addition to any Company incentive payments as described***

(Continued on Sheet D-123.01)

(Continued from Sheet D-123.00)

STANDARD CONTRACT RIDER NO. 21 **UTILITY INVESTMENT TARIFF FOR ELECTRIC BUS BATTERIES AND CHARGING STATIONS**

in 3.1, any grants or state or federal incentives available to the customer that can be used to lower the Customer's incremental cost of all-electric buses within 1 year of the delivery of the new bus must be included in the Plan and cost effectiveness analysis.

3.3 COPAY OPTION: In order to qualify a project that is not sufficiently cost effective for the Program, a Customer may agree to pay the portion of a project's cost that prevents it from qualifying for the Program as an upfront copayment to the seller. The Company will assume no responsibility for copayments.

3.4 COST EFFECTIVENESS ANALYSIS REVIEW FEE: If the cost of the Company's review of the Plan and its associated cost effectiveness analysis exceeds the lifecycle value to the Company of all-electric buses procured by Customer based on the Utility Cost test, the Company may recover from Customer the portion of the cost for its review and analysis that is greater than the value of the investment to the Company. The Company will not recover costs for its review of analyses if the Company concludes that proposed all-electric bus procurements are cost effective only with a copayment. The Company will recover all of its costs for the analysis from a Customer who declines to procure electric buses identified as cost effective in a Plan that does not require a copayment.

4 ACCEPTANCE: Should the Customer wish to proceed with implementing the Plan approved by the Company, the Company will determine the appropriate monthly Service Charge, as described in Section 6. The Customer will sign an Upgrade Procurement Agreement (Agreement) and select a vendor from the Company's list of approved vendors or seek approval of its preferred vendor to effect the procurement of Upgrades.

4.1 NOTICE: If the Customer does not own the property where the electric buses are to be charged, the Customer must secure the site owner's signature on an Owner Agreement, agreeing to the installation on the property of fixed assets associated with charging the all-electric buses. Owner must agree to not remove or damage these fixed assets, to have a Notice of the Upgrades attached to their property records, and to provide notice to successor customers at this location of the benefits and obligations of the Upgrade Procurement Agreement associated with the all-electric buses. Failure to obtain the signature of a successor customer on the Notice Form indicating that the successor customer received notice will constitute the owner's acceptance of consequential damages and permission for a tenant or purchaser to break their lease or sales agreement without penalty.

5 QUALITY ASSURANCE: When the Customer's procurement is completed, the vendor will be paid the amount that is determined to be cost effective by the Company as described in Section 3 and 6, following on-site or telephone inspection by the Company or its Agent confirming operation of the new equipment and decommissioning of any diesel equipment it replaced.

6 PROGRAM SERVICE CHARGES: The Company will recover the costs for Upgrades, including any fees as allowed in this tariff, through a fixed monthly Program Service Charge (Service Charge) assigned to the location where charging occurs until all Company costs have been recovered. Service

(Continued on Sheet D-123.02)

(Continued from Sheet D-123.01)

STANDARD CONTRACT RIDER NO. 21

UTILITY INVESTMENT TARIFF FOR ELECTRIC BUS BATTERIES AND CHARGING STATIONS

Charges must meet the net savings requirements described in Section 3.2. Service Charges will be set for a duration either equal to the length of a full parts and labor warranty or not to the exceed 80% of the estimated life of the new buses, including any major part replacements such as batteries, unless the cost for these replacements is covered by the Agreement and included in the Company's analysis as described in Sections 3.2 and 3.4, whichever is longer. The Service Charges and their duration will be included in the Agreement.

6.1 COST RECOVERY: No sooner than 45 days after approval of completed electric bus procurement(s) by the Company or its Agent, the Customer shall be billed the monthly Service Charge as determined by the Company. The Company will bill and collect Service Charges until cost recovery is complete except in cases discussed in Section 7.

6.2 VACANCY OR LOCATION CHANGE: If the Customer leaves the electric service location where the buses are charged, they must either relocate the charging assets and the associated Service Charges to a new location within the Company's service territory or pay the Company an amount equal to all of the remaining Service Charges and any Company incentives in Section 3.1.

6.3 TERMINATION OF SERVICE CHARGE: Once the Company's costs described in Section 6 have been recovered, the monthly Service Charge in Section 6 shall no longer be billed, except as described in Section 7.

6.4 EXTENSION OF SERVICE CHARGE: As described in Section 7 or for any other reason, if the monthly Service Charge is reduced or suspended, once repairs have been successfully effected or service reconnected, the number of total monthly payments shall be extended until the Service Charges collected equal the Company's cost for its investment in an electric bus, including costs associated with repairs, deferred payments, and missed payments as long as the current occupant is still benefitting from the all-electric buses. Service Charges will not be extended if the Company obtains cost recovery from a reserve fund or from all ratepayers.

6.5 TIED TO THE LOCATION: Until cost recovery for the Company's investments in electric buses for a Customer at a billing location is complete or these buses fail as described in Section 7, the terms of this tariff shall be binding at the metered location and on any future Customer who receives service at that location. If the Customer or its successor wishes to relocate its operations from the assigned meter, it must first obtain consent from Company and the Customer must agree to assign its payment obligation to the new location.

6.6 DISCONNECTION FOR NON-PAYMENT: Without regard to any other Commission or Company rules or policies, the Service Charges will be considered an essential part of the Customer's bill for electric service, and the Company may disconnect the metered location for non-payment of Charges under the same provisions as for any other electric service.

(Continued on D-123.03)

(Continued from Sheet D-123.02)

STANDARD CONTRACT RIDER NO. 21

UTILITY INVESTMENT TARIFF FOR ELECTRIC BUS BATTERIES AND CHARGING STATIONS

7 ***REPAIRS:** During the billing of Service Charges, the battery should remain under manufacturer warranty. If the charging equipment capitalized by the Company no longer functions as intended and the Company determines that the Customer did not damage or fail to maintain the Upgrades, then the Company shall reduce or suspend the Service Charges until such time as the Company and/or its vendor can repair the Upgrades. If the electric bus and/or charging station(s) cannot be repaired or replaced cost effectively, the Company will waive remaining Service Charges.*

If an Upgrade fails, the Company is responsible for determining its cause and for repairing the equipment in a timely manner as long as the Customer, Owner if different, or occupants did not damage them, in which case the Customer will reimburse the Company as described in Section 7.

If the Company determines the Customer, or bus owner if different, damaged or failed to maintain the electric bus, it will seek to recover from the Customer all costs associated with the installation, including any fees, the Company's cost for capital, incentives paid to lower project costs, and legal fees.

The Service Charges will continue until cost recovery is complete.

8 ***MAINTENANCE OF UPGRADES: Participating Customers must agree to keep all Upgrades in place for the duration of Service Charges, to maintain them per manufacturers' instructions, and report their failure to the Company or its Agent as soon as possible. As described in Section 2.4, if the Customer is not the site owner, the site owner must sign an Owner's Agreement.***

9 ***OWNERSHIP OF UPGRADES: During the period of time when Service Charges are billed to Customers at locations where procurement of Upgrades are located, the Company will retain ownership of the Upgrades. Upon termination of the Service Charge, ownership will be assigned to the site owner unless the Agreement specifies a different party than the site owner or Company.***

10 ***MONITORING AND EVALUATION: The Company or its Agent will compare each participant's post-installation actual annual savings to estimated annual savings at least once for each location. If any instances are identified where actual savings are below 80% of the estimated savings in Section 3.2, the Company or its Agent will investigate to identify the cause and take appropriate action, including action described in Section 7 above or enforcement of agreements with contractors or participating customers.***

(Continued from Sheet No. E-8.00)

RETAIL ACCESS SERVICE RIDER – RIDER EC2 (Contd.)

E4. TERM, COMMENCEMENT OF SERVICE AND RETURN TO FULL SERVICE

E4.1 Term

E4.1.1. Retail Access Service For Non-Residential Customers

Retail Access Service shall have a minimum term of two years subject to the provisions of Section E4.3. Upon completion of the initial term, Retail Access Service shall continue on a month to month basis until terminated by the Alternative Electric Supplier, the Customer or DTE Electric.

The Alternative Electric Supplier may request Retail Access Service on behalf of a Customer by submitting an electronic enrollment request to DTE Electric.

The in-service date for Retail Access Service shall be determined as follows:

a. If a Retail Access Service enrollment request is received three (3) or more days prior to the next billing cycle start date, then the in-service date for Retail Access Service shall be the next billing cycle start date after the awarding of an Energy Allotment in accordance with the procedures adopted by the MPSC in Case No. U-15801 on April 20, 2017.

b. If a Retail Access Service enrollment request is received less than three (3) days prior to the next billing cycle start date and an Energy Allotment has been awarded in accordance with the procedures adopted by the MPSC in Case No. U-15801 on April 20, 2017, then the in-service date for Retail Access Service shall be the billing cycle start date immediately following the next billing cycle start date.

c. If a Retail Access Service enrollment request is received but an Energy Allotment is not awarded and the Customer is placed in the Enrollment Queue in accordance with the procedures adopted by the MPSC in Case No. U-15801 on April 20, 2017, then the in-service date shall be the next billing cycle start date after a future awarding of an Energy Allotment.

The Alternative Electric Supplier may terminate Retail Access Service by submitting an electronic drop request to DTE Electric.

The Customer may initiate termination of Retail Access Service by notifying their Alternative Electric Supplier, by notifying DTE Electric in writing, or by contacting the Electric Choice Customer Center.

The ***termination*** effective date for Retail Access Service shall be ***the next*** billing cycle ***start date, provided the Retail Access Service termination request was received*** no less than three (3) business day***s prior to the next billing cycle start date***.

If an Alternative Electric Supplier defaults, a Customer may elect to change its Alternative Electric Supplier or return ***to*** full service for 12 months within 60 days of the default and pay tariff rates as provided for in Section E4.3. All other customers who fail to give less than 60 days notice are subject to DTE Electric's ability to supply their requirements.

The terms of service associated with any previously contracted or newly initiated service are specified below:

Retail access service provided to new locations served by DTE Electric shall be for an initial minimum term of five years over which time the minimum charges shall apply. Contributions in Aid of Construction for distribution facilities will be per tariff rate.

Service provided to existing locations shall be for the unexpired portion of any existing contract but not less than a term of one year over which time the minimum charges shall apply.

After the expiration of the contract minimum term for Retail Access Service, the contract shall be extended thereafter, from month-to-month.

Minimum charges shall be adjusted each year to recognize actual demand.

(Continued on Sheet No. E-10.00)

(Continued from Sheet No. E-10.00)

RETAIL ACCESS SERVICE RIDER – RIDER EC2 (Contd.)

E4 TERM, COMMENCEMENT OF SERVICE AND RETURN TO FULL SERVICE (Contd.)

E4.2 Commencement of Service

E4.2.1 Retail access service shall be initiated by a Customer choosing an Alternative Electric Supplier and the subsequent submission of an electronic enrollment by the Alternative Electric Supplier on behalf of the Customer in a manner specified by DTE Electric. Alternative Electric Supplier submission of the enrollment warrants that a valid contract with the prospective Customer exists. DTE Electric shall be required to complete all ***Retail A***ccess enrollment activities required of it to get the enrollment to "site-ready" status within the timeframes specified in Section E2.4.

E4.2.2 Retail access service may not commence until metering has been installed as specified in this Rider or agreements related thereto and:

In addition, DTE Electric must have received from the Alternative Electric Supplier:

(i) the Alternative Electric Supplier's warranty, that the Alternative Electric Supplier has obtained all necessary approvals authorizing the Alternative Electric Supplier to conduct business at each Location to be served, and

(ii) the Alternative Electric Supplier's warranty, that each enrollment submitted is in full compliance with requirements for enrollment and is backed by proper authorization from the Customer allowing the Alternative Electric Supplier to enroll the Customer in retail access.

E4.3 Return to Full Service

A In addition to the notice of termination provided in Section E4.1, a Customer shall provide DTE Electric with written notice no later than December 1st if the Customer will be taking full service from DTE Electric during the following summer. For this purpose, "summer" means DTE Electric regularly scheduled billing periods beginning June 1st through September 30th. Customers who so notify DTE Electric shall be obligated to take full service from DTE Electric for twelve months and pay for such service at any tariff rate for which the customer qualifies.

If a Customer does not provide DTE Electric with written notice prior to December 1st and then takes full service from DTE Electric during the following summer, the Customer shall pay DTE Electric the higher of (a) the applicable tariff energy prices plus 10% or (b) the Market Priced Power charges plus 10% until such time as the minimum two year commitment to retail access service has been met and the December 1st written notice requirement has been met.

B Subject to the notice provisions of Section E4.3A, Customers that discontinue retail access service may return to DTE Electric Full Service under the following conditions:

(Continued on Sheet No. E-12.00)

(Continued from Sheet No. E-18.00)

RETAIL ACCESS SERVICE RIDER – RIDER EC2 (Contd.)

E16 CUSTOMER PROTECTION (Contd.)

Commercial and Industrial Retail Access Service Customers' right to cancel an enrollment shall be in accordance with the terms of their contract with their Alternative Electric Supplier(s).

E16.6 A supplier must allow the Staff of the Commission an opportunity to review and comment on its residential contract(s) and residential marketing material at least five business days before the Supplier intends to use these contract(s) and marketing material in the marketplace.

MARKETER SECTION

E17 REAL POWER LOSSES

The Marketer used by the Alternative Electric Supplier is responsible for replacing losses associated with the delivery of Power to the Customer's meter. The amount of Power delivered by DTE Electric on the DTE Electric Distribution System to the Customer's meter shall be adjusted using the following real power loss factors for distribution service:

		Month											
	Losses (%)	***Jan***	***Feb***	***Mar***	***Apr***	***May***	***Jun***	***Jul***	***Aug***	***Sept***	***Oct***	***Nov***	***Dec***
Voltage	***120 kV and above***	***1.67***	***1.65***	***1.51***	***1.58***	***1.48***	***1.62***	***1.58***	***1.49***	***1.46***	***1.58***	***1.58***	***1.52***
	24/40 kV	***3.94***	***3.93***	***3.67***	***3.55***	***3.52***	***3.75***	***3.80***	***3.73***	***3.61***	***3.72***	***3.73***	***3.71***
	4.8/13.2 kV	***5.68***	***5.61***	***5.14***	***5.16***	***4.99***	***5.67***	***6.14***	***5.89***	***5.30***	***5.15***	***5.37***	***5.45***
	Secondary (<4.8kV)	***9.47***	***9.32***	***8.76***	***8.55***	***8.32***	***9.98***	***10.30***	***10.52***	***9.14***	***8.49***	***9.03***	***9.08***

Marketers must schedule and supply an amount of Power equal to its Customers' hourly usage (1 - D%) to account for losses on the DTE Electric Distribution System, where D% is the applicable loss factor from the table above.

E18 HOURLY USAGE DATA TO SUPPORT MISO SETTLEMENT

E18.1 Meter Data Management Agent

At the option of the Marketer, DTE Electric will act as their Meter Data Management Agent (MDMA) for their customer loads within DTE Electric's service area. The Marketer is under no obligation to take this service from DTE Electric.

If the Marketer takes MDMA service from DTE Electric, then DTE Electric shall provide the Marketer with the same data it reports to MISO at the same time it reports such data to MISO and in usable computer form. If DTE subsequently corrects the data it reports to MISO, then DTE Electric shall provide the corrected data to the Marketer at the same time and shall identify which data, including hourly meter readings, are being corrected.

(Continued on Sheet No. E-20.00)

Michigan Public Service Commission Case No.: U-20836

DTE Electric Company ATTACHMENT C

Capacity Charge Calculation

FOR ORDER

	Total Electric	
CAPACITY COSTS DETERMINATION		
Net Production Costs Rev. Req.	$ 3,116,055	
Proj '22 Enrgy Sales Rev Net of Fuel & Recon	$ (311,655)	
Less Fuel	$ (990,902)	
Less MERC Revenue Requirement	$ (39,392)	
Less MISO Energy in PP	$ (36,539)	
Less Other Energy in PP	$ (234,384)	
Less Variable O&M	$ (28,481)	
Capacity Revenue Requirement	$ 1,474,703	
Capacity Charge Demand (10k)	12,524	MW
Capacity Charge /MW-Year	$ 117,750	
Capacity Charge /MW-Day	$ 322.60	

P R O O F O F S E R V I C E

STATE OF MICHIGAN)

Case No. U-20836

County of Ingham)

Brianna Brown being duly sworn, deposes and says that on November 18, 2022 A.D. she electronically notified the attached list of this **Commission Order via e-mail transmission**, to the persons as shown on the attached service list (Listserv Distribution List).

Brianna J. Brown

Brianna Brown

Subscribed and sworn to before me
this 18th day of November 2022.

Angela P. Sanderson

Angela P. Sanderson
Notary Public, Shiawassee County, Michigan
As acting in Eaton County
My Commission Expires: May 21, 2024

Service List for Case: U-20836

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