

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * * *

In the matter, on the Commission's own motion,)	
to implement the provisions of Section 6t of)	Case No. U-18461
2016 PA 341.)	
_____)	

At the October 27, 2022 meeting of the Michigan Public Service Commission in Lansing,
Michigan.

PRESENT: Hon. Daniel C. Scripps, Chair
Hon. Tremaine L. Phillips, Commissioner
Hon. Katherine L. Peretick, Commissioner

ORDER

I. HISTORY OF PROCEEDINGS

On December 21, 2016, Public Act 341 of 2016 (Act 341), an amendment to Public Act 3 of 1939 and Public Act 286 of 2008, was signed into law and became effective on April 20, 2017. Section 6t(3) of Act 341 requires each electric utility whose rates are regulated by the Commission to file an integrated resource plan (IRP) within two years from the effective date of Act 341. MCL 460.6t(3). Section 6t(3) states that the Commission “shall issue an order establishing filing requirements, including application forms and instructions, and filing deadlines for an integrated resource plan filed by an electric utility whose rates are regulated by the commission.” *Id.*

The Commission Staff (Staff) worked with various stakeholders to prepare a draft of the IRP filing requirements. On December 20, 2017, in Case Nos. U-15896 *et al.* (December 20 order),

the Commission approved application instructions for IRP filings and IRP filing requirements.

December 20 order, p. 27. Section 6t(6) of Act 341 provides, in part, that:

An existing supplier of electric generation capacity currently producing at least 200 megawatts of firm electric generation capacity resources located in the independent system operator's zone in which the utility's load is served that seeks to provide electric generation capacity resources to the utility may submit a written proposal directly to the commission as an alternative to any supply-side generation capacity resource included in the electric utility's integrated resource plan submitted under this section

MCL 460.6t(6). In addition, under Section 6s(4)(a) of Act 341, the Commission must grant a certificate of necessity (CON) to an electric utility if it finds, among other determinations, that “the electric utility has demonstrated a need for the power that would be supplied by the existing or proposed electric generation facility or pursuant to the proposed power purchase agreement through its approved integrated resource plan under section 6t or subsection (11).”

MCL 460.6s(4)(a). As such, the Commission also approved instructions for CON alternative proposals for electric generation capacity resources filed under Section 6s of Act 341.

On September 11, 2019, in Case No. U-20464 (September 11 order), the Commission accepted and adopted the Statewide Energy Assessment (SEA) Final Report.¹ The SEA was conducted in response to significant concerns about whether Michigan's energy system can reliably produce and deliver energy to all Michigan utility customers as extreme weather events increase following the polar vortex event in late January 2019. The SEA discussed gaps in existing planning processes and identified areas that could be improved, such as increased diversity in supply resources, improved generation diversity, and revisions to currently approved

¹ The SEA Final Report is available on the Commission's website at: <https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t0000005XrEbAAK> (accessed October 26, 2022).

utility IRP modeling parameters and filing requirements. September 11 order, p. 9; *see also*, Case No. U-20464, filing #U-20464-0063, pp. 190-192.

On October 17, 2019, in Case No. U-20645 (October 17 order), the Commission commenced the MI Power Grid Initiative in which the Commission made the following commitment:

Advanced planning processes for electric investments (resources, transmission, and distribution) will be examined to ensure modeling tools, assumptions, and processes are adapting to technology change, and to better integrate discrete planning activities currently being conducted for new resources (e.g., generation, demand-side options), transmission, and distribution, as detailed in the 2019 Statewide Energy Assessment. Work will also be done to quantify the value of resilience, particularly as it relates to distributed energy resources, as well as the value of diversity in the electric resource mix, in order to ensure proper consideration of both when evaluating proposed investments.

October 17 order, p. 8 (emphasis omitted). As a part of Advanced Planning Phase II of the Integration of Resource, Distribution, and Transmission Planning workgroup, the Staff initiated a collaborative to review and discuss improvements and ways to better align integrated resource planning and distribution planning.

On August 20, 2020, the Commission opened the docket in Case No. U-20633 (August 20 order) and directed the Staff to begin outreach through a series of stakeholder sessions to research best practices in integrated resource and distribution planning pursuant to the SEA and MI Power Grid Initiatives. The Commission's directives included "[i]dentifying potential revisions to the Commission-approved IRP modeling parameters or the filing requirements to better accommodate transmission alternatives in IRPs in preparation for the next formal review of the Michigan IRP Planning Parameters expected to take place in 2022." August 20 order, pp. 3-4. In the August 20 order, the Commission directed the Staff to file a report of its findings and recommendations on potential revisions to the IRP filing requirements by May 27, 2021.

In its October 29, 2020 order in Case Nos. U-20633 *et al.* (October 29 order), the Commission provided an overview of the MI Healthy Climate Plan announced by Governor Gretchen Whitmer on September 23, 2020, through Executive Directive (ED) 2020-10 and Executive Order 2020-182. The MI Healthy Climate Plan commits Michigan to “pursue at least a 26-28% reduction below 2005 levels in greenhouse gas emissions by 2025 and to accelerate new and existing policies to reduce carbon pollution and promote clean energy deployment at the state and federal level.” October 29 order, pp. 4-5 (quoting ED 2020-10, p. 1). The Commission explained that Michigan will aim to achieve carbon-neutrality by 2050 and maintain net negative greenhouse gas emissions thereafter. October 29 order, p. 5 (citing ED 2020-10, p. 2). The Commission outlined that ED 2020-10 directs the Michigan Department of Environment, Great Lakes, and Energy (EGLE) to expand its environmental advisory opinion filed in the Commission’s IRP process under Section 6t of Act 341, MCL 460.6t, and file environmental advisory opinions in IRPs filed under Section 6s of Act 341, MCL 460.6s. October 29 order, pp. 4-5 (quoting ED 2020-10, pp. 2-3). The Commission provided that EGLE was directed to:

evaluate the potential impacts of proposed energy generation resources and alternatives to those resources, and also evaluate whether the IRPs filed by the utilities are consistent with the emission reduction goals included in this [ED]. For advisory opinions relating to IRPs under both MCL 460.6s and MCL 460.6t, [EGLE] must include considerations of environmental justice and health impacts under the Michigan Environmental Protection Act. The Commission’s analysis of that evidence must be conducted in accordance with the standards of the IRP statute and the filing requirements and planning parameters established thereto.

October 29 order, p. 5 (quoting ED 2020-10, pp. 2-3). In light of this directive, the Commission found that “the process of updating utility IRP planning parameters and filing requirements should take into account the goals set by Michigan’s utilities and how those goals align with the greenhouse gas emissions targets set by Governor Whitmer.” October 29 order, p. 6.

On May 27, 2021, the Staff filed its report (May 27 report) outlining a number of recommendations for aligning distribution, IRP, and transmission planning processes including increased consistency and coordinated timing, increased communication and transparency, and iterative planning. *See*, Case No. U-20633, filing #U-20633-0017. On September 24, 2021, in Case Nos. U-20633 *et al.* (September 24 order), the Commission accepted the Staff's May 27 report and adopted the recommendations made therein. In the September 24 order, pursuant to the above outlined initiatives, the Commission directed the Staff to create redlined versions of the IRP filing requirements and engage in stakeholder meetings for Advanced Planning Phase III of the Integration of Resource, Transmission, and Distribution Planning MI Power Grid workgroup. The Commission directed the Staff to file a final draft of the revised IRP planning parameters on June 30, 2022. The Staff timely filed the revised IRP filing requirements. Simultaneously, the Staff conducted stakeholder workgroups and proposed revisions to the Michigan IRP Planning Parameters (MIRPP). The MIRPP, presented in Case No. U-21219, are meant to act as a companion guidance document to the IRP Filing Requirements. While the MIRPP are statutorily required to be updated every five years under Section 6t(1)(f-i) of Act 341, MCL 460.6t(1)(f-i), utilities filing IRPs should rely on the most recently approved IRP Planning Parameters in conjunction with these IRP Filing Requirements.

On July 7, 2022, the Commission solicited comments from interested persons on: (1) the proposed IRP filing requirements. The Commission received comments from Michigan Biomass; Michigan Energy Innovation Business Council and Advanced Energy Economy (jointly, EIBC/AEE); the Association of Businesses Advocating Tariff Equity (ABATE); Consumers Energy Company (Consumers); International Transmission Company (ITC); DTE Electric Company (DTE Electric); the City of Grand Rapids (Grand Rapids); and the Environmental Law

& Policy Center, Ecology Center, Michigan Environmental Council, Natural Resources Defense Council, Sierra Club, Union of Concern Scientists, and Vote Solar (together, the Joint Commenters). On October 2, 2022, the Commission received reply comments from DTE Electric, ABATE, the Joint Commenters, and Consumers. The filed comments and replies are outlined below.

II. COMMENTS

A. Michigan Biomass

Michigan Biomass, a business coalition of the state's wood-fired power plants, encourages the Commission to continue to consider the value of diversity in supply resources and generation in addition to diversity in the electric resource mix. Michigan Biomass's comments, pp. 1, 3. Michigan Biomass outlines the reliability attributes of fuel diversity unique to biomass power, including stable pricing, offsetting coal generation, and serving as a local source of fuel; and the system support that biomass generation provides in the form of dispatchability and voltage stabilization that contribute to overall grid resiliency. *Id.*, pp. 4-5. Michigan Biomass comments that biomass fuel resources are byproducts that would otherwise have a negative environmental impact but instead support sustainable forestry and management practices. *See, id.*, p. 5. Michigan Biomass recommends the Commission include language in the revised filing requirements that directs the Staff to continue to work with energy stakeholders to develop appropriate assumptions, tools, and rules, to ensure diverse resources are properly valued in the IRP planning process. *Id.*, p. 7.

B. Michigan Energy Innovation Business Council and Advanced Energy Economy

EIBC/AEE provide an overview of their recommendations which generally support the proposed changes to the IRP Filing Requirements. *See*, EIBC/AEE's comments, p. 2. EIBC/AEE

support the requirement that utilities issue a request for proposals (RFP) for new supply-side resources. *Id.*, p. 3. EIBC/AEE support the Staff’s approach to stakeholder engagement including the recommendation that utilities hold hybrid (virtual and in-person) public meetings to educate the public on utility planning processes and provide the opportunity for public comment. *Id.* EIBC/AEE recommend that all presentation materials be made publicly available for the duration of the IRP proceeding and through the subsequent IRP proceeding. *Id.* EIBC/AEE support the inclusion of the State’s and utilities’ climate action goals in the IRP Filing Requirements. *Id.* EIBC/AEE support the approach to renewable energy in the IRP Filing Requirements including the requirement that the utilities include the following descriptions:

- 1) How the electric provider’s plan is consistent with the renewable energy goals required by the Michigan Legislature (e.g. 35% combined renewable energy and energy waste reduction (EWR) goal by 2025);
- 2) The options for customer-initiated renewable energy that will be offered by the electric provider and forecast sales of customer-initiated renewable energy; and
- 3) How the electric provider will meet the demand for customer-initiated renewable energy.

Id., p. 4. However, EIBC/AEE note that additional clarity could be provided to the term “customer-initiated renewable energy,” which it understood to refer to “behind-the-meter customer or third-party owned projects, community solar projects, as well as other renewable energy developed to meet demand from utility Voluntary Green Pricing (‘VGP’) programs.” *Id.*

EIBC/AEE support the inclusion of details related to electric vehicle (EV) adoption assumptions and the impact on overall peak demand energy forecasts in the IRP filing requirements at large.

Id., p. 5. However, EIBC/AEE weigh in on their concern that electric vehicles are classified solely as demand-side resources. EIBC/AEE recommend the Commission include EVs as supply-side power and storage capacity resources given the vehicle-to-grid (V2G) applications of EVs.

Specifically, EIBC/AEE recommend “the role of electric vehicles in providing supply-side power and storage capacity through V2G applications should be added to the requirements of Section VI: Existing Supply-Side Resources, along with an express requirement to model V2G as a supply-side resource in future projections.” *Id.*

C. Association of Businesses Advocating Tariff Equity

ABATE recommends three changes to the Commission’s IRP filing requirements. First, ABATE recommends that under the IRP Filing, Data, and Documentation section, the Commission specify the scenario and sensitivity to be used in the executive summary for the energy and pollutants charts described in subparts (i) and (j). ABATE posits that the utility’s “best estimate of operating conditions is a proper scenario for inclusion in the executive summary.” ABATE’s comments, p. 2. Second, ABATE states that it appreciates the inclusion of language in Section XV, Modeling Results, subpart (f) requiring an analysis on the impacts on resource adequacy. ABATE recommends the language be expanded to include the following:

The utility must provide a detailed demonstration that its Proposed Course of Action (“PCA”) and any alternative resource plans will meet all applicable resource adequacy requirements. This analysis should definitively demonstrate that the resource plans will meet or remain below the applicable loss of load probability traget [sic] under resource dispatch assumptions vastly similar to actual operations within the utility’s Regional Transmission Organization (“RTO”), rather than assuming the utility’s balancing area is an island with access to outside resources via transmission. For utilities operating in the MISO [Midcontinent Independent System Operator, Inc.] RTO, a separate analysis should be conducted that considers and incorporates a seasonal resource adequacy construct.

ABATE’s comments, p. 2. Finally, ABATE recommends a new section be added containing an analysis of the company’s approved proposed course of action to ensure the IRP proceeding can be evaluated against the company’s previously filed PCA. ABATE specifies that this analysis should

“take into account impacts associated with meeting sustainability targets.” *Id.*, p. 3. ABATE suggests the following language be included in the IRP Filing Requirements:

If an IRP proceeding results in an approved resource portfolio that differs from those provided in the Company’s filed IRP, the Company is required to provide information regarding how this new approved resource portfolio compares with the Company’s filed PCA in terms of the considerations set out in MCL 460.6t(8)(a) (i.e. (i) resource adequacy and capacity to serve anticipated peak electric load, applicable planning reserve margin, and local clearing requirement; (ii) compliance with applicable state and federal environmental regulations; (iii) competitive pricing; (iv) reliability; (v) commodity price risks; (vi) diversity of generation supply; and (vii) whether the proposed levels of peak load reduction and energy waste reduction are reasonable and cost effective) and filing requirements sections (I) (Executive Summary), (XV) (Modeling Results), (XVI) (Proposed Resource Plan), (XIX) (Rate Impact and Financial Information), (XXII) (Environmental Considerations and Environmental Justice). This information must be provided within thirty (30) days of a Commission Order approving an IRP under MCL 460.6t(7) or, in the case of a proposed settlement agreement, prior to a settlement agreement being filed for Commission approval. This comparative analysis and information is necessary so that stakeholders and the Commission may understand the impacts of any approved resource portfolio relative to the Company’s PCA, including all assumptions and data underlying the same.

ABATE’s comments, pp. 3-4.

D. Consumers Energy Company

Consumers submits that it appreciates the time and effort of the Staff to lead workgroups and prepare the revised IRP filing requirements. From an administrative standpoint, Consumers comments that it would be helpful to all participants in the proceeding if a complete redline version of the IRP Filing Requirements identifying all newly proposed language and language deletions were provided. Consumers also states that while most of the conversation that informed the updates to the IRP Filing Requirements took place verbally over the course of a number of workgroup discussions, a written explanation supporting the proposed filing requirements would allow greater transparency. To this end, Consumers recommends that greater emphasis be placed

on providing written explanation for the proposed revisions to the IRP Filing Requirements. Consumers' comments, p. 3.

The Revised IRP Filing Requirements state that a utility's IRP filing shall include a risk analysis of the proposed resource plan and optimal plan filed by the utility as required by the MIRPP as well as additional scenarios and sensitivities filed with the IRP application. *See*, Case No. U-18461, filing #U-18461-0031, p. 3 (Revised IRP Filing Requirements). Consumers proposes the phrase "and sensitivities" be removed from this introduction paragraph. Consumers supports the requirement to conduct risk analysis on the proposed course of action and optimal plans for each scenario; however, the company does not support the requirement for evaluation of the optimal plan for each sensitivity. The company posits that this would be "highly burdensome" and that it is beyond the intent of risk analysis. Consumers' comments, pp. 3-4.

Subpart (c) of the Pre-Filing Request for Proposals section of the Revised IRP Filing Requirements states that "[t]he IRP filing shall include evidence that the pre-filing RFP process was conducted in a manner consistent with the Commission's code of conduct, and applicable state, federal, and Commission rules, and any adherence with the competitive procurement guidance in Case No. U-20852." Revised IRP Filing Requirements, p. 3. Consumers proposes that this language be removed from the filing requirements as it goes beyond what is required by Section 6t of Act 341, MCL 460.6t. Consumers noted that in the September 9, 2021 order in Case No. U-20852 (September 9 order), the Commission stated "that it 'is not imposing [the guidelines] use as a requirement for cost recovery.'" Consumers' comments, p. 4 (quoting September 9 order, p. 23). Consumers asserts that as the competitive bidding guidelines adopted in the September 9 order are not required to be used, they should not be referenced in the filing requirements. Consumers recommends the Commission adopt the following proposed language if the

Commission desires a reference to the competitive bidding guidelines: “[t]o the extent that the Commission’s competitive procurement guidelines are used in the pre-filing RFP, the IRP Filing shall include an explanation of how the competitive procurement guidelines were used.”

Consumers’ comments, pp. 4-5.

Subsection (n) of the Approval of Costs section provides that for supply-side resources of less than 225 megawatts (MW) planned to commence in the three years following approval of the IRP, the utility shall provide evidence of its “[p]rocurement strategy, including power purchase agreements (PPAs) and company owned. Reference the most recent Commission approved Competitive Procurement Guidelines.” Revised IRP Filing Requirements, p. 9. Consumers recommends that this language be removed from the IRP filing requirements. Consumers posits that Section 6t(12) of Act 341 addresses the procurement process for new electric facilities approved in an IRP that are to be owned by the electric utility. *See*, MCL 460.6t(12). Consumers also restates its position that the competitive bidding guidelines should not be referenced in the IRP filing requirements as they are not statutorily mandated. Consumers’ comments, p. 5.

Subsection (o) of the Approval of Costs section provides that for supply-side resources of less than 225 MW planned to commence the three years following approval of the IRP, the utility shall provide “[a] summary description of the decommissioning process, costs, and how the utility intends to provide assurance of proper disposal with consideration of material salvage and recycling for proposed new resources.” Revised IRP Filing Requirements, p. 9. Consumers recommends removal of this requirement for three reasons. First, Consumers states that as its “clean energy installs are relatively recent, the Company is still decades away from disposal needs.” Consumers’ comments, p. 5. Second, Consumers posits that there is “not currently great technology in place for spent resources like wind turbine blades and solar panels.” *Id.* Finally,

Consumers avers that it would be a challenge to assemble a reasonable cost prediction “considering a useful asset life is 25-35 years and the Company cannot necessarily predict what logical strategies/technologies will look like this far into the future.” *Id.*

Additionally, Consumers notes that in a situation where materials fail prior to the end of life, the company works with the manufacturer on warranty and disposal. Consumers acknowledges that, “[w]ith regard to solar, more than 95% of photovoltaic panels are recyclable and multiple regional recyclers are currently recycling panels in Ohio, Wisconsin, and Tennessee.” *Id.*, p. 6. Consumers posits that “replacing and upgrading panels can easily extend the overall useful life of an installation” as the existing infrastructure in place is projected to last more than 50 years. *Id.*

The renewable resources section of the Approval of Costs section states “[t]he utility shall file data consistent with any approved renewable procurement plan.” Revised IRP Filing Requirements, p. 9. Consumers argues that this revision is unnecessary and “change[s] the entire intent of the subsection without any explanation of the issues those revisions are meant to address.” Consumers’ comments, p. 6. Consumers asserts that the “IRP filing requirements already require an extensive amount of data regarding utility generation portfolios” and therefore “it is unclear why a utility would be required to file additional data on its approved portfolio of generating resources in the Approval of Costs section.” *Id.*

Subsection (b) of Part IV, Analytical Approach, of the IRP Filing, Data, and Documentation section of the IRP Filing requirements states that:

[t]he utility shall describe and identify how its model approach optimizes resources to meet load and demand for all times of the year and for each year of the planning horizons. The utility shall explain how the model considers the seasonal and operational characteristics of all resource types, including monthly generation profiles . . .

Revised IRP Filing Requirements, pp. 14-15. Consumers proposes that the word “monthly” be removed from this subsection as “utilities should be permitted to present profiles that make the most sense, based on resource technology.” Consumers’ comments, p. 6.

Part VI, Existing Supply-Side Resources, states that utilities should provide a “[d]etailed account of projected energy and capacity purchased or produced by the utility’s owned and contracted resources, including cogeneration resources.” Revised IRP Filing Requirements, pp. 15-16. The requirement further states that this account should “[i]nclude data regarding the utility’s current generation portfolio, including . . . licensing status” *Id.*, p. 16. Consumers comments that this section should be edited to remove the requirement that utilities provide licensing status as “the utility does not have all of the information requested on licensing and time of operation for PPAs.” Consumers’ comments, p. 7.

Part XI, Capacity and Reliability Requirements, states “[t]he utility shall indicate how it complies, and will comply with all finalized state, federal, ISO, RTO capacity and reliability regulations, laws, rules, and requirements” Revised IRP Filing Requirements, p. 18. In this section, the word “applicable” has been replaced with the word “finalized.” *Id.* This section goes on to state that “[t]he utility shall identify any finalized changes to the applicable state, federal, or local laws, rules, and regulations.” *Id.* Consumers comments that “[t]he word ‘applicable’ should be reinstated in the first sentence and the second sentence should be modified to only focus on applicable ‘state, federal, or local laws, rules, and regulations’ which are applicable and in effect.” Consumers’ comments, p. 7. Consumers asserts that the word “finalized” may cause confusion or disputes as to what constitutes a finalized law. *Id.*

Consumers comments that in Part XIX, Rate Impact and Financial Information, “the word ‘incremental’ should be added before ‘revenue requirements’ to more accurately capture the analysis of the resource plan.” *Id.*

The Revised IRP Filing Requirements propose to add a new subsection to the IRP Filing, Data, and Documentation section. The new section XXI, states:

If the utility is proposing retirement of generation facilities that are expected to have an undepreciated book balance at the time of retirement, the utility shall include an analysis of various financing options for the remaining book balance if the utility is asking for specific treatment of the undepreciated book balance in its IRP. The utility shall:

- a) include an analysis of various financing options for the remaining book balance;
- b) identify the impact the different financing options have on the NPVRR [net present value of revenue requirements] of the proposed resource plan over the entire planning horizon; and
- c) provide detail to support how the financing treatment requested balances benefits to the utility and its ratepayers.

Revised IRP Filing Requirements, p. 25. Consumers proposes that the above language be removed from the filing requirements. Consumers comments that the language is “inconsistent with the IRP law and legal standards applicable to proposals of this nature.” Consumers’ comments, p. 8. Consumers also posits that this language should be removed because “it references undefined and unlimited ‘various financing options’ which means that it will not be known how to precisely comply with this proposed requirement.” *Id.*

Consumers objects to the requirement of subsection (I)(a) of Appendix 1 that the previously approved portfolio be run through MIRPP Scenario 1. Consumers states that this requirement “creates an entirely new scenario for the IRP filing, as the assumptions are required to be updated and as stated this is going to result in a need for additional optimization to align with the new study period.” *Id.* Further, Consumers posits that this requirement to perform modeling “creates

misalignments in comparisons that will result in being unable to do a true one-to-one comparison of a previously approved portfolio to updated resource plan” *Id.*, pp. 8-9. The company proposes that the IRP Filing Requirements instead require regression lines or other graphical representations to compare emission projections between different plans and previously approved IRPs.

Consumers supports the Appendix 1, Part VI requirement that utilities provide information to determine the impact of particulate matter (PM2.5) emissions on vulnerable communities. However, Consumers expresses concerns regarding the requirement to conduct air dispersion modeling for three reasons:

- (a) it will not add incremental value beyond facility-specific mass emission data;
- (b) [it] is beyond EGLE’s legal authority to require dispersion modeling except in narrow circumstances related to certain facility permitting—which is not the case in an IRP, and
- (c) the Company does not believe this requirement should apply unless the models project an increase in PM2.5 emissions beyond historical dispatch levels due to uncertainty inherent in long-term model projections.

Id., p. 9; *see also, id.*, pp. 10-11.

E. International Transmission Company

ITC comments that to address the relatively tight capacity position in MISO’s Local Resource Zone (LRZ) 7 and transition from large, centralized, dispatchable generation to distributed, intermittent renewable generation, the Risk Assessment Methodology section of the IRP filing requirements should:

be expanded to require that MISO load-serving entities within Michigan perform a Risk Assessment that mirrors MISO’s existing Resource Adequacy process. More specifically, the Risk Assessment should focus on calculating out-year Local Reliability Requirements (“LRRs”). This metric is an output of a Loss of Load Expectation (“LOLE”) study of LRZ 7 as an island—crucially, it calculates the generating capacity required to yield a 0.1-day-per-year LOLE at the load level for the LRZ at the time of the LRZ peak, without assistance from resources outside the LRZ. Thus, by identifying the LRR for LRZ 7 as part of the IRP Filing, each

Michigan load-serving entity will be better positioned to ensure that its resource plan is aligned with, and sufficient for, the resource adequacy standards used by MISO. The results of this assessment will also assist the state and its incumbent utilities in planning Michigan's electric infrastructure to meet future demand while allowing Michigan transmission owners and load-serving entities to collaboratively identify and remedy resource adequacy and reliability considerations endemic to LRZ 7 in its current configuration.

ITC's comments, p. 3 (in natural order). To incorporate this analysis, ITC recommends that the following language be added to page 5 of the Revised IRP Filing Requirements:

For utilities with one million or more customers, the IRP filing shall include a Local Reliability Requirement (LRR) analysis for the proposed resource plan and for the respective LRZ per Section 5.2.2.2 of MISO's Resource Adequacy Business Practice Manual. The LRR analysis shall, at a minimum, be performed at five-year increments for the entire IRP outlook period. The purpose of this calculation will be to estimate the marginal impact of the utility's proposed resource plan on LRZ 7's planning reserve margin, as characterized by the LRR, over the course of the forecast period.

Section XII of this document describes the Transmission Analysis requirements of the utility's IRP filing. The incumbent Transmission Owner (TO) shall perform LRZ 7 Capacity Import Limit (CIL) calculations for each year the utility performs the LRR calculations assuming the utility's proposed resource plan.

Estimates of the marginal impact of the utility's proposed resource plan on LRZ 7's LRR and CIL determines the marginal impact on the Zone's Local Clearing Requirement (LCR) which explicitly identifies the amount of internal unforced capacity needed to meet NERC Reliability Standards of a one day in ten years Loss of Load Expectation (LOLE).

ITC's comments, pp. 3-4.

F. DTE Electric Company

DTE Electric comments that it appreciates the effort of the Staff and all intervenors in this collaborative. Regarding subpart (c) of the Pre-Filing Request for Proposals language on page 3 of the Revised IRP Filing Requirements, quoted above, DTE Electric "assumes that, since the competitive procurement guidelines are not rules, the intent of this section is to instruct utilities to provide an explanation of whether the utility followed the competitive procurement guidelines and

to what extent, and if not why, and that these explanations be supported by evidence.” DTE Electric’s comments, p. 2. DTE Electric comments that, as the Competitive Bidding Guidelines are not binding, the Commission may not require utilities to provide evidence of compliance with these guidelines. DTE Electric states that it is reasonable for the Commission to require utilities to explain whether they have followed the Competitive Bidding Guidelines and recommends the Commission clarify the Revised IRP Filing Requirements to this end.

Subpart (d) of the Pre-Filing Request for Proposals section states that “[t]he RFP shall allow for proposals to provide new supply-side capacity resources to partially meet the requirement, pursuant to MCL 460.6t(6).” Revised IRP Filing Requirements, p. 3. DTE Electric comments that the phrase “partially meet” is unclear and recommends the Commission expand on or clarify the intended meaning. DTE Electric’s comments pp. 2-3.

As outlined above, the Risk Assessment Methodology section states that “[t]he utility’s IRP filing shall include a thorough risk analysis of the proposed resource plan and the optimal plans for each of the scenarios specified in the Michigan Integrated Resource Planning Parameters (MIRPP), as well as all additional scenarios and sensitivities filed with the IRP application.” Revised IRP Filing Requirements, p. 5. DTE Electric echoes Consumers’ sentiments that this requirement is “overly burdensome.” DTE Electric’s comments, p. 3. Additionally, DTE Electric states that, “[i]f risk analysis is different from a risk assessment, which is what utilities generally perform on the proposed course of action and major scenarios, the Commission should provide more information regarding what the risk analysis entails.” *Id.*

The Definitions section defines “vulnerable communities” as referring to “vulnerable or historically underserved or disadvantaged communities that are identified in accordance with metrics and percentiles as advised by the specific environmental justice screening tool used. It is

preferred that utilities use MI EJ Screen tool to the extent practicable.” Revised IRP Filing Requirements, p. 7. Footnote 4 of the Revised IRP Filing Requirements states that “USEPA [United States Environmental Protection Agency] recommends the use of at or above the 80th percentile for the state.” *Id.* DTE Electric comments that “[t]here is not a standard definition or percentile index that can be applied across all IRPs.” DTE Electric’s comments, p. 3. DTE Electric states that as the EPA supports a definition of vulnerable community in the 80th percentile, “[s]electing a percentile index substantially lower than EPA’s 80th percentile would be arbitrary.” *Id.*, pp. 3-4. The definition of “vulnerable communities” also states that it is preferred that utilities use the MIEJScreen: Environmental Justice Screening Tool to the extent practicable. Revised IRP Filing Requirements, p. 7. DTE Electric notes that the MIEJScreen tool is currently in draft/beta form and a percentile defining vulnerable communities has not been proposed. DTE Electric’s comments, p. 4.

DTE Electric comments that the definition of “demand-side resources” in the Definitions section “be updated to clearly indicate that distribution connected storage is referring to behind-the-meter distribution connected storage for customer-sited stationary storage systems.” *Id.*

DTE Electric recommends the Commission add the phrase “to the extent practicable” to several proposed requirements in Subsection XII, Transmission Analysis, of the IRP Filing, Data, and Documentation section, as outlined in its comments. *Id.* DTE Electric comments that, as a utility, the company’s access to certain transmission information is limited and the company will depend on the local transmission owner or RTO to provide the information.

Section XV, Modeling Results, subsection (f) of the IRP Filing, Data, and Documentation section suggests that the “[i]mpacts on resource adequacy for the resource zone” be included in a utility’s “analysis of the capital costs, energy production, energy production costs, fuel costs,

energy served, capacity factor, emissions (levels and costs), and viability of all reasonable options available to meet projected energy and capacity needs, including, but not limited to, existing electric generation facilities in this state.” Revised IRP Filing Requirements, pp. 21-22. DTE Electric suggests that the phrase “[i]mpacts on resource adequacy for the resource zone” be changed to “[i]dentify the impact the different financing options have on customers, using an NPVRR *or other analysis* to show impact.” DTE Electric’s comments, pp. 4-5 (emphasis in original). DTE Electric comments that “[t]he current IRP tools are not capable of considering embedded system costs and related recovery methods and the utility should have flexibility to analyze using other methods.” *Id.*, p. 5. Further, DTE Electric states that “while NPVRR is an important metric for customer impact, it does not capture all the key considerations regarding the different alternatives, such as impact (1) to customers’ annual revenue requirement or (2) to the utility’s balance sheet.” *Id.*

Section XXII, Environmental Considerations and Environmental Justice, subpart (c) in part requires the utility to “identify and justify its use of a carbon accounting methodology identified in Electric Power Research Institute, Methods to account for Greenhouse Gas Emissions Embedded in Wholesale Power Purchases.” Revised IRP Filing Requirements, pp. 25-26. DTE Electric recommends the phrase “or other appropriate carbon accounting methodology” be added to expand the carbon accounting methodology beyond those identified in the report to account for new methodologies addressing carbon accounting that may emerge. DTE Electric’s comments, p. 5.

DTE Electric recommends changes to Section XXIII, Exhibits and Workpapers. Subsection (b) requires “an exhibit that depicts a stacked bar graph that includes the RTO capacity credit for all existing resources and new resources for all scenarios and sensitivities” Revised IRP Filing Requirements, p. 27. DTE Electric restates that requiring the utility to provide highly

detailed information on all scenarios and sensitivities is overly burdensome and suggests this exhibit be limited to the optimized plan under each scenario analyzed with no sensitivities applied. DTE Electric makes the same recommendation for subsection (c) which requires “an exhibit of stacked bar graphs that include the energy expected to be produced by all existing resources, new resources, and market purchases for each planning year and for all MIRPP required scenarios and sensitivities.” Revised IRP Filing Requirements, p. 27. Finally, DTE Electric notes that the company suggests adding “or other appropriate carbon accounting methodology” to subsection (d) of Section XXIII, Exhibits and Workpapers, in addition to the Environmental Considerations and Environmental Justice section above. DTE Electric’s comments, p. 6.

Finally, Section VI of Appendix 1 requires that if “a decrease in PM2.5 emissions is not demonstrated at each individual electric generating unit within a 6-mile radius of an identified vulnerable community, including any new proposed units that could reasonably be expected to locate within the 6-mile radius,” then a utility “conduct dispersion modeling for PM2.5 including all electric generating unit(s) within a 6-mile radius of the identified vulnerable community.” Revised IRP Filing Requirements, p. 30. DTE Electric recommends this requirement be updated to state “[i]f unchanged PM2.5 emissions or a decrease in PM 2.5 emissions are not demonstrated,” then the utility conduct dispersion modeling to recognize that an individual unit could maintain similar operations in the future. DTE Electric’s comments, p. 6. DTE Electric states that “[a]ny unit that shows unchanged emissions will maintain the same impact in the air dispersion model.” *Id.*

G. City of Grand Rapids

Grand Rapids requests the Commission incorporate the following into the MIRPP and IRP Planning Parameters:

- Require utilities to prioritize, in terms of all types of resources (staff time, funding, marketing, etc.), energy waste reduction (EWR). The greater we can all reduce our electricity consumption, the better for all. In addition, require that utilities focus at least 40% (based on Justice40) of all EWR resources in vulnerable/EJ [environmental justice] communities. Require that utilities track, analyze and publicly report their experiences with EWR programs, including resources committed, projects completed for income-qualified residents, location of all EWR investments/projects overlaid with census demographics information; results of EWR investments; and breakdown of EWR program investments into businesses and residents. Require that these inputs be included in EWR modeling.
- Require utilities to provide the following data in modeling and plans:
 - What targets/goals would be achieved based on modeling and how it compares to utility's, State of MI and U.S. [United States] GHG [greenhouse gas] emissions reductions goals;
 - the GHG emissions factors used to calculate current and future estimated emissions for both owned and purchased electricity;
 - The total average MWh [megawatt hour]/year reduction expected from EWR, demand response, battery storage, and distributed generation and the total percent supply reduction;
 - The total average MWh/year increase expected from the electrification of the transportation sector, the electrification of buildings and the growth in the economy, especially electricity-intensive industries such as cannabis and in-door grow operations;
 - Estimated EWR achieved due to the recently approved building codes that are estimated to reduce energy consumption by approximately 30% for newly constructed buildings as well as those going through major renovation; and
 - Reduction in estimated electricity needed for the transportation sector with increased investment in public transit and non-motorized forms of transportation
- Require utilities to conduct research and development on future issues that will significantly impact the energy sector, including the use of hydrogen fuel cells, fuel switching and building electrification and incorporate this into modeling.
- Require utilities to factor in reliability and supply reduction due to distributed generation, EWR, battery storage, microgrids, tree canopy maintenance. While power outages are not something specifically addressed in IRP filings, utilities should be required to model how increasing reliability of the grid via these various opportunities will impact supply and consumption. In addition, upgrades to electrical distribution and transmissions systems will also impact the amount of electricity supply needed.
- Require utilities, in addition to EGLE, to conduct their own environmental justice analysis of all programs, including energy generation, community engagement, EWR, pilot programs, etc. In addition, require that utilities, measure and include energy burden by geographic area, account type (single family residential, multi-family residential) and income qualification in modeling and planning.

- Ensure that utilities are required to include their owned generation as well as generation purchased from MISO in all analysis, data reporting and modeling.
- How the Federal government’s investment in the infrastructure bill and Inflation Reduction Act will impact energy supply and consumption
- Give EGLE’s EJ opinion more weight than merely advisory.
- Require that utilities consider how to broaden engagement beyond 12 months prior to filing their IRP as most utilities have their plans fully created by this time and therefore engagement received at this point is likely to have little impact on the final IRP, especially the modeling. Require that utilities provide accessible engagement opportunities that are focused on traditionally vulnerable populations /EJ communities – including payment for participation for residents and community-based organizations, transportation, childcare, and food; provide information in non-English languages and for visually and audio impaired residents. Require that utilities work most closely with municipalities when doing IRPs as municipalities understand key factors that will impact energy consumption. Require that utilities conduct at least one, and preferably more, engagement events focused specifically on environmental justice issues.
- Require utilities to take into consideration climate science to ensure supply and consumption is forecasted based on future climate projections.
- Require that utilities research, plan for and implement end of life processes that are sustainable for all energy generation types.
- Require utilities to collaborate to understand what is happening across the entire State of Michigan and the upper-Midwest region to plan appropriately for energy supply and consumption.

Grand Rapids’ comments, pp. 2-4 (in natural order).

H. Joint Commenters

The Joint Commenters organize their comments (joint comments) into the following categories: (A) Environmental and Public Health; (B) Assessment of Climate Risk; (C) Assessment of Energy Equity; (D) Assessment of Distributed Energy Resources; (E) Stakeholder Engagement and Public Outreach; and (F) Pre-Filing Requests for Proposals.

i. Environmental and Public Health

The Joint Commenters generally support the inclusion of environmental and public health analyses in the IRP Filing Requirements. In the Risk Assessment Methodology section, the Joint Commenters suggest that the risk analysis “assess the inclusion of additional federal funding that may affect rates of adoption for electric vehicles, energy efficiency and decarbonization rates.” Joint comments, p. 2. The Joint Commenters add that this section should account for the possibility of more stringent carbon regulations by the federal government.

Page 7 of the Definitions section defines “Co-Benefits” as “[b]enefits that are quantified as part of another planning process that are important to the justification of a resource included in the IRP. Examples include benefits to distribution planning or transmission planning” The Joint Commenters suggest explicitly adding non-energy related co-benefits to the definition as well as examples by adding the following sentence to the definition: “Co-benefits can also include non-energy benefits such as public health or energy affordability.” Joint comments, p. 2.

The Joint Commenters suggest deleting footnote 4 from the definition of “vulnerable communities,” provided above, reasoning that “[a]lthough the USEPA has stated that it identified the 80th percentile level as an ‘initial starting point’ for ‘identifying geographic areas that may warrant further consideration,’ USEPA also states that threshold could change and screeners ‘may opt to designate starting points that are more inclusive.’” Joint comments, pp. 2-3 (footnote omitted). The Joint Commenters recommend that the Commission use a 75th percentile for the purposes of the IRP Filing Requirements. *Id.*, p. 3.

The Joint Commenters recommend that the Approval of Costs section require that “the approval of costs for sources under 225 megawatts include the projected greenhouse gas and criteria pollutant emissions for each year of operations, as well as the costs associated with those

emissions, and an estimate of total GHG impact per year to account for emissions from extraction, production, and transportation of fuels.” Joint comments, p. 3. The Joint Commenters also suggest revising subpart (o) of the Approval of Costs section to include projected costs of on-site pollution remediation. *Id.*

The Joint Commenters suggest that when providing guidance for presenting modeling results in Section XV, the language specifically include the level and costs of emissions as identified in their comments. *Id.*

The Joint Commenters recommend adding subsections (j) and (k) to Section XIX, Rate Impact and Financial Information. The Joint Commenters recommend utilities provide information about the impact of a proposed plan on rates and customer bills. The Joint Commenters suggest the following language be added to the Revised IRP Filing Requirements:

j) projected rates across all rate classes under each scenario (based on currently approved rate structures)

k) projected average monthly residential customer bills under each scenario (based on currently approved rate structures)

Joint comments, p. 4.

The Joint Commenters suggest the language of Section XXII, Environmental Considerations and Environmental Justice, “include additional language that provides more data regarding the utility’s progress towards net-zero carbon emissions and identifies high-risk fossil fuel assets.” *Id.*

The Joint Commenters recommend the following revised language:

c) Include a chart that compares the annual and total projected carbon emissions and total GHG impacts (i.e., the estimated GHG emissions from the extraction, production, and transport of fuel used by each unit and the total fleet, in addition to the combustion of that fuel) under each scenario analyzed (no sensitivities applied), including quantifying the carbon emissions projected in each sensitivity as a percentage of the carbon emissions presented in the base scenario associated with that sensitivity. The utility shall identify and justify its use of a carbon accounting methodology identified in Electric Power Research Institute, Methods to account

for Greenhouse Gas Emissions Embedded in Wholesale Power Purchases. The utility is encouraged to use either of the two net approaches, but should make best efforts to move toward hourly accounting in order to determine the utility's progress towards 100 percent clean energy as opposed to net-zero carbon emissions;

d) For each fossil-fuel asset, explain whether it is at high-risk of becoming a stranded asset from a climate perspective and why or why not;

Id. (emphasis omitted).

Subsection (l) of Section XXIII, Exhibits and Workpapers requires utilities to include exhibits and workpapers of “(e)stimated annual emissions of CO₂ [carbon dioxide] and greenhouse gases, particulates, SO₂ [sulfur dioxide], NO_x [nitrogen oxide], and Hg [mercury] per year and over the study period of the facilities included in their IRP.” Revised IRP Filing Requirements, p. 28. The Joint Commenters suggest the addition of “along with nearby populations (e.g., number of people living within 3 miles and 12 miles of the facility)” to the end of subsection (l). Joint comments, pp. 4-5.

The Joint Commenters suggest modifying Section II of Appendix 1 to include language that “quantifies in total tons and tons per MWh and per MMBtu [thousand British thermal units] the emissions from all generation owned and purchased by the utility,” as outlined in their comments. Joint comments, p. 5. The Joint Commenters also recommend inclusion of a subsection (i) in Section II that quantifies the total greenhouse gas emission impacts of the utility's unit and fleet. The Joint Commenters propose the following language: “[t]otal GHG impacts (i.e., the estimated GHG emissions from the extraction, production, and transport of fuel used by each unit and the total fleet, in addition to the combustion of that fuel).” *Id.*

Section III of Appendix 1 requires utilities to “[a]nalyze all portfolios to identify and quantitatively assess the potential impacts to vulnerable communities. The utility will perform an Environmental Justice Screening using the EPA Environmental Justice Screening and Mapping

Tool (EJSCREEN) or the Michigan Environmental Justice Screening Tool (MiEJScreen).” Revised IRP Filing Requirements, pp. 29-30. The Joint Commenters suggest editing the requirement to “clarify that the MiEJScreen is preferred and other tools—the US EPA’s EJSCREEN or the Center for Disease Control’s Agency for Toxic Substances and Disease Registry’s (‘ATSDR’) Environmental Justice Index—should be used as a backup tool” Joint comments, p. 5.

Section V of Appendix 1 states that “[t]o determine health impact estimates for air emissions, the utility will use the environmental Benefits Mapping and Analysis Program – Community Edition (BenMAP-CE), the Co-Benefits Risk Assessment (COBRA) Health Impacts Screening and Mapping Tool, or a similar analytical tool with mapping features and spatial resolution down to at least the county level.” Revised IRP Filing Requirements, p. 20. The Joint Commenters suggest that the Commission clarify what is meant by “a similar analytical tool” by including the following descriptor: “that calculates PM_{2.5}-related health impacts as number of health instances/endpoints and monetary value for the entire contiguous United States.” Joint comments, p. 6. The Joint Commenters also suggest that the facility/unit level data be included in the analysis and proposes language to that end be added to subsection (a) of Section V.

The Joint Commenters suggest that in Section VI of Appendix 1, the filing requirements include the reporting of SO₂ and NO_x, as PM 2.5 is often a secondary pollutant of those emissions. Joint comments, p. 6.

Section VIII of Appendix 1 requires a “[n]arrative discussion of the quantitative and qualitative health and environmental impacts . . . methodologies, data sources, and related observations. Explain how these considerations were taken into account in the utility’s decision.” Revised IRP Filing Requirements, p. 31. The Joint Commenters recommend the phrase “including

community feedback on these findings” be added to the end of this requirement to clarify the role of stakeholder engagement in the public health and environmental impact analysis. Joint comments, p. 7.

ii. Assessment of Climate Risk

The Joint Commenters state that the filing requirements do an adequate job of addressing climate risk. To improve and clarify these requirements, the Joint Commenters suggest additional language for subsection (g) of the Approval of Costs section and subsection (b) of Section IV of the IRP Filing, Data, and Documentation section of the filing requirements to improve the treatment of extreme heat events. Joint comments, p. 7.

iii. Assessment of Energy Equity

Subsection (b) of the EWR requirements outlined in the Approval of Costs section states that utilities shall provide “[t]otal demand (MW) and energy (megawatt hours (MWh)) reduction potential” for each individual EWR program. Subsection (f) of the Demand Response (DR), Distributed Energy Resources (DERs), and other demand-side resources section requires a “[d]escription of program, including customer enrollment.” The Joint Commenters suggest that the total demand and energy reduction potential and customer enrollment in subsections (b) and (f), respectively, be “broken down by customer class and indicat[e] the portion of customers who are low-income households (based on households enrolled in income-eligible programs or known to be eligible for those programs).” Joint comments, p. 8.

iv. Assessment of Distributed Energy Resources

The Joint Commenters recommend that the Commission include aggregation of DERs in the filing requirements. Specifically, the Joint Commenters request that the Commission “ensure

DERs are modeled and treated as supply-side resources, over which the utilities have considerable control, rather than a reduction in load.” Joint comments, p. 9.

The Joint Commenters suggest that in the Pre-Filing Request for Proposals section, the filing requirements explicitly include aggregation of DERs. The Joint Commenters request “including aggregation of DER” be added after “any new supply-side capacity resources” in the introductory paragraph for that section. Additionally, the Joint Commenters “suggest a multi-pronged process to facilitate competition by DERs that includes one track for front-of-the-meter DERs and one for behind-the-meter DERs.” *Id.* The Joint Commenters recommend the following language explaining this two-step approach be included as a new subsection in the Pre-Filing Request for Proposals section: “[t]he RFP shall include one track for front-of-the-meter DERs and one track for behind-the-meter DERs and should also allow for DER aggregation proposals to proceed in stages with the first stage based on a set of pre-determined criteria and the second stage soliciting detailed confidential data.” *Id.*

Section VI, Existing Supply-Side Resources, of the IRP Filing, Data, and Documentation section requires the utilities to provide a “[d]etailed account of projected energy and capacity purchased or produced by the utility’s owned and contracted resources, including cogeneration resources” and include “data regarding the utility’s current generation portfolio, including the age, capacity factor, licensing status, and remaining estimated time of operation for each facility in the portfolio.” Revised IRP Filing Requirements, pp. 15-16. The requirements then list units to be included in the account, including fossil-fuel, nuclear, hydroelectric, and renewable units; energy storage facilities; PPAs; and RTO/Independent System Operator capacity credits. The Joint Commenters suggest adding distributed energy resources as a category and distinguishing between biomass and non-biomass renewable generating units.

The Joint Commenters recommend a subsection (g) be added to Section VIII, Renewables and Renewable Portfolio Standards Goals, of the IRP Filing, Data, and Documentation section. The Joint Commenters suggest the Commission require “modeling of distributed generation as a resource consistent with the Consumers Energy IRP settlement and Xcel Energy’s recent IRP approval in Minnesota.” Joint comments, p. 10. To this end, the Joint Commenters provide the following language:

g) The renewable resources available shall include economic distribution connected solar to be modeled by bundling resources installed at the customer level to compare the total economic costs to the utility of distributed generation as a resource to other selectable supply-side resources, consistent with the methodology used for EWR. The utility shall develop a model that accounts for all utility costs and/or incentives associated with participating and non-participating distributed generation customers.

Id.

v. Stakeholder Engagement and Public Outreach

The Joint Commenters emphasize the importance of effective stakeholder engagement in the IRP process. The Joint Commenters recommend changes to “further improve and strengthen the Stakeholder Engagement and Public Outreach Process.” *Id.*, p. 11. The recommendations are incorporated into the language of the MIRPP, but include, in short, that the utilities:

- ensure representation from a broad array of stakeholders, including but not limited to representatives of each rate class, environmental interests, environmental justice advocates, representatives from local government, and consumer advocates;
- present the details of the integrated resource planning process in accessible, non-technical language that includes, but is not limited to, descriptions of the impacts of the utility’s plans on communities, average monthly residential customer electric bills (based on currently approved rate structures), the environment, and public health;
- provide notice to customers in languages in addition to English to engage communities where English may not be the first language;
- coordinate with community-based organizations when organizing and promoting meetings about the filing;

- solicit input regarding the time, place, and manner of the meetings from the community organizations;
- ensure that meetings are held in locations that are easily accessible by public transportation;
- provide equivalent content and equivalent and sufficient time for robust public response at each session;
- including translations of materials and at least one live interpreter who can translate in the requested language;
- include in its public outreach report a concise general statement of the basis and purpose of the comments received by the utility, how the utility considered, addressed, or rejected the issues raised in those comments, and discussing how issues raised during the stakeholder process are addressed by and incorporated in the IRP;
- use best efforts to provide a translation of recordings of the meeting in a language specified by the person requesting the translation when requested 30 days subsequent to a meeting; and
- make best efforts to provide the translation recordings within 15 business days after the request is received.

See, Joint comments, pp. 11-13.

vi. Pre-Filing Requests for Proposals

The Joint Commenters suggest that in addition to “the IRP application documentation demonstrating that the RFP process was completed” required by subpart (a) of the Pre-Filing Request for Proposals section, the utility provide “a detailed explanation of how the resulting proposals were used to inform the IRP.” *Id.*, p. 13.

III. REPLY COMMENTS

A. DTE Electric Company

DTE Electric filed reply comments in response to the Joint Commenters, Grand Rapids, Consumers, EIBC/AEE, and ABATE. DTE Electric disagrees with the Joint Commenters’ and Grand Rapids’ proposed modifications to the Stakeholder Engagement and Public Outreach Process. DTE Electric replies to Grand Rapids suggestion that stakeholder engagement should begin at least 12 months prior to filing the IRP as most utilities have their plans fully created by

this time. DTE Electric’s reply comments, p. 2; *see also*, Grand Rapids’ comments, p. 4. DTE Electric states that it “begins its engagement with stakeholders prior to beginning its modeling, and at various times throughout the modeling process, well before a proposed course of action is selected, which typically occurs in the final stage of modeling, usually just a couple months prior to filing an IRP.” DTE Electric’s reply comments, p. 2. As such, DTE Electric asserts that beginning the stakeholder engagement process more than 12 months prior to filing an IRP is impractical. In response to the Joint Commenters recommendation that DTE Electric “ensure representation of a broad array of stakeholders,” DTE Electric states that the company can “ensure that opportunities for meaningful engagement are well publicized and available to a broad array of stakeholders.” DTE Electric’s reply comments, p. 3; *see also*, Joint comments, p. 11. However, DTE Electric notes that “attendance of stakeholder representatives at stakeholder engagement events is optional, not mandatory,” and as such, the company cannot ensure representation from any particular stakeholder. DTE Electric’s reply comments, p. 3. DTE Electric comments that “there is not a one-size fits all formula for stakeholder engagement that will fit every utility, every community, and every customer; utilities must be allowed the flexibility to engage their varied stakeholders in the way that is appropriate for each utility.” *Id.*

DTE Electric agrees with Consumers that Section 6t(6) of Act 341, MCL 460.6t(6), is clear with regard to requirements for RFPs. DTE Electric posits that proposed additions from the Joint Commenters “create confusion and add unnecessary restrictions” beyond those required by statute. DTE Electric’s reply comments, p. 3.

DTE Electric agrees with Consumers that the proposal to add “[a] summary description of the decommissioning process, costs, and how the utility intends to provide assurance of proper disposal with consideration of material salvage and recycling for proposed new resources” should

not be included in the IRP filing requirements. *Id.*, p. 4 (quoting Revised IRP Filing Requirements, p. 9). DTE Electric supports the removal of proposed items (o) under supply-side resources and (k) under renewable resources in the Approval of Costs section. DTE Electric concurs with Consumers that the company is “still decades away from disposal needs” and “recognizes the lack of direction for spent resources and the challenge of estimating costs nearly three decades in the future.” DTE Electric’s reply comments, p. 4.

To that end, DTE Electric comments that the Commission should not adopt the Joint Commenter recommendation to include projected costs of on-site pollution remediation to item (o) in the Approval of Costs section. DTE Electric states that “[g]iven proposed new resources will not subject to decommissioning, proper disposal, material salvage and recycling for decades, utilities cannot guess what environmental regulations may be in place decades in the future, or what methods or technologies may then be available.” *Id.* Further, DTE Electric states that the IRP process includes requirements for environmental regulations, laws, and rules and provides for a review by EGLE to determine if the PCA can reasonably achieve compliance with relevant environmental regulations.

DTE Electric does not support the Joint Commenters requirement that the utility include “an estimate of total GHG impact per year to account for emissions from extraction, production, and transportation of fuels” *Id.*, p. 5; Joint comments, p. 3. DTE Electric comments that “[a]s the proposed resources are not yet approved at the time of proposing them in an IRP, the utility will not have determined the supply for that resource when filing the IRP.” DTE Electric’s reply comments, p. 5. Further, DTE Electric states that “there are no industry-accepted data sources from which utilities could draw estimates of emissions from extraction, production, and

transportation fuels for all the various fuel sources that might be available to fuel the proposed resource.” *Id.*

DTE Electric replies to the Joint Commenters suggestion to update Section XV, Modeling Results, to include the level and costs of emissions of the pollutants identified in Appendix 1. DTE Electric notes that this is “overly burdensome and would require another iterative step in the process that incorporates other models in addition to the capacity expansion tool” DTE Electric’s reply comments, p. 5. DTE Electric comments that this recommendation should not be adopted.

DTE Electric replies to the Joint Commenters recommendation that the language of subsection (l) of the Modeling Results section be expanded to include the impact of emissions on nearby populations. DTE Electric responds that this information would be not available for “approved Renewable Energy Plan (REP) or Voluntary Green Pricing VGP MWs for assets that have not yet been sited” or “proposed additions of assets to meet REP, VGP, energy, or capacity needs in the future, as the locations for these proposed builds or acquisitions would not be known to the Company” *Id.*, p. 6. Additionally, DTE Electric comments that “it is unclear how to measure the population, which can be expected to change over time, or how utilities would project populations in future years.” *Id.* As such, DTE Electric states the Commission should not adopt this recommendation.

DTE Electric responds to EIBC/AEE’s recommendation that V2G be modeled as generation and storage in future proceedings. DTE Electric states that “[t]hese resources are not industry accepted” and “there are currently no industry-accepted data sources from which to model the impact of EVs as either generation or storage resources.” *Id.*

DTE Electric replies to the Joint Commenters recommendation to add subsection (d) to Section XXIII, Exhibits and Workpapers. DTE Electric objects to the inclusion of a requirement that the utility explain whether each fossil-fuel asset is at risk of becoming a stranded asset from a climate perspective. DTE Electric comments that this requirement is “overly vague,” that it “asks the utility to identify and specifically address the net book value of all existing assets, a subject that is not relevant to modeling, or to how utilities will plan to meet the capacity and energy needs of their customers in the future,” and that depreciation issues are outside of the scope of an IRP as they are handled in a dedicated proceeding. *Id.*, p. 7.

DTE Electric replies to ABATE’s proposed new section that outlines specific IRP processes. DTE Electric states that the inclusion of this language would conflict with the provisions of Act 341 that set forth standards for the scenarios ABATE outlines including contested and uncontested settlements.

B. Association of Businesses Advocating Tariff Equity

ABATE submits comments in response to Consumers suggestion that Section XXI of the IRP Filing, Data, and Documentation section requiring analysis of undepreciated book balance at the time of retirement be stricken from the filing requirements. ABATE comments that “requiring a utility to provide more information regarding the costs of its proposals does not present a ‘new and vague evidentiary burden’” as Consumers suggests, but that additional detail will assist the Commission and stakeholders in determining if the company’s PCA meets the statutory burden of representing the most reasonable and prudent means of meeting a utility’s energy and capacity needs. ABATE’s reply comments, p. 4 (quoting Consumers’ comments, p. 8). Further, ABATE states that retirement information is vital as “[w]hen a utility’s PCA calls for retiring a generating facility that has unrecovered book value, the recovery of that balance can have significant impacts

on customer rates.” *Id.*, p. 5. Thus, ABATE suggests the Commission include the proposed language of Section XXI in the final IRP Filing Requirements.

C. Joint Commenters

The Joint Commenters reply to the comments of Consumers and DTE Electric. The Joint commenters disagree with Consumers’ assertion that air dispersion modeling required in Appendix 1 either be removed from the filing requirements or required only when models project an increase in PM_{2.5} emissions. The Joint Commenters seek to expand the analysis and use of air dispersion modeling and “support the filing requirements inclusion of air dispersion modeling as additional information to assess the impacts to vulnerable communities, as well as the requirement that it be conducted unless all units are shown to have a decrease in emissions.” Joint reply comments, pp. 1-2. The Joint Commenters continue to recommend that air dispersion modeling include SO₂ and NO_x in addition to PM_{2.5}. The Joint Commenters note that “with respect to only conducting air dispersion modeling when units are projected to have an increase in PM_{2.5} emissions, the more important metric for human health are PM_{2.5} concentrations.” *Id.*, p. 2 (emphasis in original). The Joint Commenters posit that “[d]irect PM_{2.5} emissions lead to increased PM_{2.5} in the atmosphere, but so do NO_x, SO₂, and volatile organic compounds, which may react chemically in the atmosphere to form PM_{2.5}.” *Id.* The Joint Commenters continue to support their suggested additions as “[a]ir dispersion modeling is needed to capture secondary pollutant formation” *Id.*

The Joint Commenters also respond to Consumers’ comment that air dispersion modeling will not add incremental value beyond facility-specific mass emission data. The Joint Commenters state that utilities “cannot determine the impacts of facilities using mass emissions data alone” as

facility impacts depend on emissions, atmospheric chemistry, meteorology, and who is exposed to the air pollution attributable to a facility. *Id.*

The Joint Commenters reply to Consumers' recommendation that subsections (o) and (k) requiring a summary description of the decommissioning process, costs, and assurance of proper disposal be removed. The Joint Commenters urge the Commission to reject this request as "[i]t is valuable to have utilities consider end-of-service needs and potential costs in the context of *any* proposed generating resource." *Id.*, p. 3 (emphasis in original). The Joint Commenters continue to support their recommendation that "decommissioning information also include projected costs of on-site pollution." *Id.*

The Joint Commenters reply to DTE Electric's comments on the definition of "vulnerable communities." Specifically, DTE Electric's statement that the USEPA "supports the 80th percentile to qualify as vulnerable" and that "[s]electing a percentile index substantially lower than EPA's 80th percentile would be arbitrary." DTE Electric's comments, pp. 3-4. The Joint Commenters state that they "are not aware of USEPA specifically recommending the 80th percentile; rather USEPA has used it as an example." Joint reply comments, p. 3. The Joint Commenters continue to support deleting footnote 4 from the filing requirements and setting the threshold for identifying vulnerable communities and populations at the 75th percentile.

The Joint Commenters reply to DTE Electric's suggestion that, in Appendix 1, Section VI, the requirement to conduct air dispersion modeling not be triggered if all units have unchanged emissions. *See*, DTE Electric's comments, p. 6. The Joint Commenters recommend that this change to Section VI be rejected and the requirement to conduct air dispersion modeling unless a

decrease in emissions has been demonstrated should be maintained. *See*, Joint reply comments, p. 4.

The Joint Commenters recognize the technical difficulties in executing hybrid meetings that DTE Electric outlined in its Stakeholder Engagement and Public Outreach comments. The Joint Commenters continue to recommend that hybrid meetings “be encouraged to the extent feasible to maximize opportunities and options for individuals to participate in meeting offerings.” Joint reply comments, p. 4. The Joint Commenters state that they find “DTE’s suggestion to make hybrid meetings optional as a reasonable one *if* utilities offer at least one in-person and at least one virtual meeting as options for individuals who may not have technical capacity to log on to a virtual meeting and who may have difficulties traveling to an in-person meeting.” *Id.* (emphasis in original). Further, the Joint Commenters propose that filing requirements should make clear that all public meetings should be recorded and made available to the public.

Finally, the Joint Commenters respond to DTE Electric’s comments on Section III of Appendix 1 requiring an environmental justice analysis for all “facilities.” The Joint Commenters posit that to the extent clarification is warranted, they “urge that peaker plants be included in the scope of the term ‘facility’ and ‘facilities’ and be included in the screening assessment for their potential impacts to vulnerable communities.” *Id.*, p. 5.

D. Consumers Energy Company

Consumers replies to EIBC/AEE’s recommendation that utilities model EVs through V2G as supply-side power and storage. Consumers comments that there are considerations that need to be made in the development of any suggested modeling changes such as:

rate of availability of EVs with V2G, the propensity of EV owners to utilize their battery for other purposes, the additional cost of installing the capability in the home, the economics of energy arbitrage given what may be 20% round trip losses

through the EV, and the frequency of energy market conditions that would justify recouping the initial investment.

Consumers' reply comments, p. 3.

Consumers replies to ABATE's proposal to expand the resource adequacy analysis to require that a utility demonstrate that its PCA that meets resource adequacy requirements also meets LOLE for the RTO. Consumers states that "it is unreasonable to require utilities to perform a loss of load probability analysis at the RTO level" and that it is "likely not possible" as LOLE analyses are "based on data availability for all resources and demand within the RTO footprint." *Id.*

Consumers posits that ABATE's recommendation to add a new section to the IRP Filing Requirements to outline specific IRP processes and "ensure the outcome of an IRP proceeding can be evaluated against the Company's filed PCA" is "unlawful and impractical." Consumers' reply comments, p. 4 (quoting ABATE's comments, p. 3). Similar to DTE Electric, Consumers comments that the IRP processes are outlined in Act 341 and ABATE's proposal would "frustrate the intent of the IRP law by impeding a utility's ability to move forward with an approved IRP." Consumers' reply comments, p. 4. Consumers states that "the modeling and analysis conducted in support of an IRP is extremely time sensitive and it typically takes well over a year to prepare an IRP filing." *Id.* Further, the company comments that "requiring a utility to conduct more modeling and analysis on an approved IRP creates an unreasonably lengthy process, particularly when a utility may need timely cost pre-approvals" *Id.*, p. 5.

In response to ITC's and Grand Rapids' recommendation that utilities expand their risk assessment to include the entire state or region, Consumers states that an individual utility should not be responsible for this calculation. *See*, Consumers' reply comments, pp. 5-6. Consumers states that a utility may not have access to all the data and information required to perform this analysis. Consumers asserts that MISO is in the best position to perform the type of analyses

requested by ITC and Grand Rapids and recommends that these requests be taken up with MISO, as it is the proper entity to perform this work.

In response to Grand Rapids' proposed requirement for utilities to focus 40% of EWR on vulnerable communities, Consumers states that this should be established as part of the biennial EWR plan filings.

Consumers agrees with DTE Electric's request for clarification of the phrase "for proposals to provide new supply-side capacity resources to partially meet this requirement" in the Pre-Filing Request for Proposals section. Consumers' reply comments, p. 8.

Consumers asserts that the comments of the Joint Commenters should not be adopted by the Commission as they were not timely filed. However, in response to the Joint Commenters' recommendation that "including aggregation of DER" be added to the Pre-Filing Request for Proposals section, Consumers replies that the language of the requirements tracks the statutory language from Act 341 and thus, no further changes to the filing requirements are appropriate.

In response to the Joint Commenters' proposed revisions to the Stakeholder Engagement and Public Outreach section, Consumers states that "the Commission has already included substantial revisions to this process" and thus, "the Commission should not adopt any additional requirements proposed by the Joint Commenters" as "[a]dditional requirements could create difficulties in the implementation of this process and vague and undefined terms could create confusion." Consumers' reply comments, p. 10.

IV. DISCUSSION

The Commission appreciates the time and input of the Staff and intervenors to improve upon the existing IRP Filing Requirements. The Commission addresses the proposed revisions *ad seriatim* in the order they occur in the Revised IRP Filing Requirements.

A. Pre-Filing Request for Proposals

Consumers and DTE Electric request clarification on the inclusion of the Competitive Procurement Guidelines in the Pre-Filing Request for Proposals section. The Competitive Procurement Guidelines were adopted by the Commission in its September 9 order. In that order, the Commission made explicit that “the adoption of the guidelines does not make conformity with the guidelines a requirement for all rate-regulated utilities in every resource procurement.” September 9 order, p. 23. The Commission restates here for reference that “the Commission encourages the use of the competitive procurement guidelines for the solicitation of all long-term resources but is not imposing their use as a requirement for cost recovery.” *Id.* As the Commission has stated, “[s]hould a utility opt to conform its RFP to the competitive procurement guidelines, it will receive the benefit of a presumption that its resulting procurement in accordance with the guidelines is reasonable and prudent.” *Id.* The Commission finds that Consumers’ proposed addition to the Pre-Filing Request for Proposals section does not change the intent of the filing requirement but provides additional clarification. Therefore, the Commission adopts Consumers’ proposed language to appropriately reflect the nature of the Competitive Bidding Guidelines.

DTE Electric and Consumers request clarification on the meaning of subsection (d) of the Pre-Filing RFP section, which states “[t]he RFP shall allow for proposals to provide new supply-side capacity resources to partially meet the requirement.” Revised IRP Filing Requirements, p. 3.

The Commission intends the phrase “partially meet” to signify a resource that partially fulfills the total energy or capacity requirement solicited in the RFP. The RFP shall allow for a wide range of project sizes where multiple projects can be selected to provide new supply-side capacity resources pursuant to Act 341, MCL 460.6t. The Commission has added additional language to clarify this requirement.

The Joint Commenters suggest the inclusion of the phrase “including aggregation of DER” after “any new supply-side capacity resources” in the introductory paragraph of the Pre-Filing RFP section. Additionally, the Joint Commenters “suggest a multi-pronged process to facilitate competition by DERs that includes one track for front-of-the-meter DERs and one for behind-the-meter DERs” as a new subsection. The Commission does not find it necessary to distinguish a separate track for the consideration of DERs in the RFP process as aggregated DERs can fully participate in the RFP alongside other resources under the current language of the filing requirements. Therefore, the Commission does not adopt the Joint Commenters additional language or proposed subsection at this time.

B. Stakeholder Engagement and Public Outreach Process

In DTE Electric’s redline of the Revised IRP Filing Requirements, the company notes that hybrid, both in-person and virtual, stakeholder meetings can be challenging due to logistics. The company also states that “video-conferencing could be disengaging for the people participating via video.” DTE Electric’s redline, p. 5. As such, DTE Electric recommends there be flexibility in the types of meetings, including virtual and in-person, and that hybrid meetings should be optional. EIBC/AEE supports the Staff’s recommended revision to the IRP filing requirements that utilities hold hybrid public meetings to educate the public on utility planning processes and provide the opportunity for public comment. *See*, EIBC/AEE’s comments, p. 3. The Joint

Commenters recommend that hybrid meetings “be encouraged to the extent feasible to maximize opportunities and options for individuals to participate in meeting offerings.” Joint reply comments, p. 4. The Commission recognizes the challenges, both logistical and technology-related, of providing hybrid meetings. As the requirement for hybrid meetings in the Revised IRP Filing Requirements is recommended and not mandatory, the Commission finds that it is unnecessary to further revise the language recommending utilities provide hybrid options for public meetings.

Grand Rapids suggests that the Commission require utilities to have a more public modeling process prior to the 12-month IRP timeline, including engagement with underrepresented groups and closer work with municipalities. The Commission acknowledges DTE Electric’s comments that the company engages with stakeholders prior to beginning its modeling and again at various points throughout the modeling process. As modeling is a time-sensitive process, the Commission encourages the utilities to seek stakeholder feedback through update workshops 12-months prior to the IRP filing, as detailed in the Revised IRP Filing Requirements. As stated in the requirements, “[t]he purpose of the pre-filing is to ensure that participants have an opportunity to provide input and stay informed regarding: (1) the assumptions, scenarios, and sensitivities; (2) the progress of the utility’s IRP process; and (3) plans for the implementation of the proposed IRP.” As the timeline for input on the modeling process is both time-sensitive and unique for each utility, the Commission declines to adopt a more prescriptive standard.

C. Risk Assessment Methodology

DTE Electric and Consumers comment that the requirement that the IRP filing include “a thorough risk analysis of the proposed resource plan and optimal plans for each of the scenarios specified in the Michigan Integrated Resource Planning Parameters (MIRPP), as well as additional

scenarios and sensitivities filed with the IRP application” is overly burdensome. The Commission clarifies that the risk assessment should include any additional scenarios the utility files beyond those required in the MIRPP and any retirement sensitivities filed with the IRP application. The Commission has updated the language of the Risk Assessment Methodology section accordingly.

DTE Electric comments that, “[i]f risk analysis is different from a risk assessment, which is what utilities generally perform on the proposed course of action and major scenarios, the Commission should provide more information regarding what the risk analysis entails.” DTE Electric’s comments, p. 3. The Revised IRP Filing Requirements use the terms “risk analysis” and “risk assessment” interchangeably. As the intention is that these two phrases refer to the same process, the Commission has changed all usages to “risk assessment” for consistency with the MIRPP and throughout the IRP Filing Requirements document.

ITC recommends that the risk assessment methodology include a requirement that MISO load-serving entities within Michigan calculate a LRR that mirrors MISO’s existing Resource Adequacy process. *See*, ITC’s comments, pp. 15-16. In a similar vein, Grand Rapids recommends that the Commission “[r]equire utilities to collaborate to understand what is happening across the entire State of Michigan and the upper-Midwest region to plan appropriately for energy supply and consumption.” ITC’s comments, pp. 3-4. Consumers replies that “an individual utility should not be responsible for calculating LRR out-year forecasts” or solving for the entire LRZ or Midwest region. Consumers’ reply comments, pp. 5-6. Consumers further argues that it is the responsibility of MISO to perform MISO-directed activity. The Commission recognizes that the company may need to make a few reasonable assumptions to calculate a LRR. However, the Commission finds that it is valuable for utilities to consider the impacts of its own planning on the

LRZ as a whole. In its June 23 order in Case No. U-21090 (June 23 order) approving Consumers' 2021 IRP, the Commission stated that:

The Commission Staff shall include a requirement for each affected utility to consider the impacts of its proposed course of action on the resource adequacy of its own customers, the Midcontinent Independent System Operator, Inc. Local Resource Zone or respective PJM Interconnection, L.L.C. Zone, and neighboring Zones, regions, or regional transmission organizations in the updated integrated resource plan filing requirements to be filed on June 30, 2022, in Case No. U-18461, as outlined in this order.

June 23 order, p. 96. As the June 23 order explained, Section 6t(8)(a)(i) and (iv) of Act 341 require that the Commission balance “[r]esource adequacy and capacity to serve anticipated peak electric load, applicable planning reserve margin, and local clearing requirement’ and ‘reliability’ to determine that the integrated resource plan is the most reasonable and prudent means of meeting energy and capacity needs.” June 23 order, p. 90 (quoting MCL 460.6t(8)(a)(i) and (iv)). In that order, the Commission acknowledged “the larger resource adequacy concerns of the objecting parties as valid and timely,” and that “[t]he broader resource adequacy of [LRZ] 7 and the MISO region has an impact on both Consumers’ customers and the state as a whole.” June 23 order, p. 91. Thus, the Commission adopts ITC’s recommendation in part, adding the following language to the risk assessment methodology section:

Utilities with one million customers or more, shall include a Local Reliability Requirement (LRR) analysis of the proposed resource plan in the IRP filing. The LRR analysis shall provide a five-year outlook of the LRR in the local resource zone. The analysis shall be conducted consistent with the resource adequacy construct used by the RTO/ISO. The purpose of this calculation is to estimate the marginal impact of the utility’s proposed resource plan on the resource adequacy of the local resource zone during the first five years of the plan.

D. Definitions

The Commission acknowledges that comments were filed regarding the definition of “vulnerable communities.” Under the advisement of EGLE, the Commission has removed the

definition of “vulnerable communities” and added the definition for “overburdened communities,” which will read as follows: “Refers to overburdened, vulnerable, underserved or disadvantaged communities that are identified in accordance with metrics and percentiles as recommended by the specific environmental justice screening tool used. It is preferred that utilities use MiEJScreen tool to the extent practicable.”

DTE Electric suggests that the definition of “demand-side resources” be updated “to clearly indicate that distribution connected storage is referring to behind-the-meter distribution connected storage for customer-sited stationary storage systems.” DTE Electric’s comments, p. 4. The Commission adopts this recommendation both in the definition section and where applicable throughout the IRP Filing Requirements.

The Joint Commenters recommend that the definition of “co-benefits” be expanded to include non-energy benefits such as public health or energy affordability. The Commission declines to further define “co-benefits” at this time. The Commission discusses the necessary public health and energy affordability analyses to be conducted by the utility using the BenMAP-CE and COBRA Health Impacts Screening and Mapping Tool in Appendix 1.

E. Approval of Costs

Consumers and DTE Electric recommend striking subsection (o) from the supply-side resources section and subsection (k) from the renewable resources section. These two subsections request “[a] summary description of the decommissioning process, costs, and how the utility intends to provide assurance of proper disposal with consideration of material salvage and recycling” for proposed new resources. The utilities posit that this requirement should be removed as the companies are decades away from disposal needs; there is not currently great technology in place for spent resources; and it would be challenging to predict end-of-life costs 25-35 years into

the future. *See*, Consumers’ comments, pp. 5-6. The Commission disagrees. The Commission recognizes that clean energy installations and new supply-side resources will have a substantial generating life prior to decommissioning. However, the Commission finds that a consideration of the decommissioning process and costs is necessary in determining the total costs of a project. The Commission acknowledges that some decommissioning processes and costs may be location specific or dependent on contracted parties but finds that a summary description of the utility’s decommissioning plan will provide needed insight into the lifetime costs of the new supply-side or renewable resource. The Commission declines to remove the relevant subsections.

DTE Electric proposes only including capital costs in the DR, DER Programs, and other demand-side resources programs section. DTE Electric quotes the September 15, 2017 order in Case No. U-18369 (September 15 order), which stated that “actual capital spending in the examination period will be reconciled against the amount approved in the IRP and recovered in the rate case, while O&M [operations and maintenance] spending will be reconciled against the amount both approved and recovered in the general rate case” DTE Electric’s redline, p. 10 (quoting September 15 order, p. 9). The Commission agrees with DTE Electric’s statements that only capital costs are approved in an IRP. The IRP Filing Requirements request information related to approval and recovery of annual O&M. The O&M information requested is in the form of general estimates, which are used to inform the approval of capital costs. The Commission finds that this information is necessary and declines to remove subsection (a)(i) from the DR, DER Programs, and other demand-side resources section.

The Joint Commenters suggest that the total demand and energy reduction potential and customer enrollment in subsections (b) and (f) of the DR, DER Programs, and other demand-side resources section be broken down by customer class and indicate the portion of customers who are

low-income households. The Commission does not believe that the IRP process is the appropriate proceeding to analyze demand-side programs with the proposed level of granularity. The Commission finds that this analysis is more appropriate for an individual EWR proceeding and thus declines to adopt the Joint Commenters' recommendation.

F. Integrated Resource Plan Filing, Data, and Documentation

i. Executive Summary

Regarding ABATE's suggestion that the Commission include a description of the scenario and sensitivity to be used in the executive summary for the energy and pollutants charts in part (i) and (j) of Section I, Executive Summary, the Commission finds that the scenarios and sensitivities are fully outlined and described in the MIRPP and declines to adopt any further language here.

ii. Analytical Approach

Consumers recommends removing the word "monthly" from subsection (b). The Commission finds that the language may be overly restrictive and adopts the utility's recommendation to remove it.

iii. Existing Supply-Side Resources

Consumers recommends the Commission remove the requirement that utilities provide licensing status for existing supply-side resources, as the utility does not have all of the requested information on licensing and time of operation for PPAs. The Commission expects the utility to work in cooperation with the companies the utility is purchasing power from to provide any available licensing information. The Commission declines to remove the proposed language.

EIBC/AEE suggest that EVs' power and storage capacity be added to the Existing Supply-Side Resources section, along with a requirement to model V2G as a supply-side resource. The Commission finds that adding a requirement to model V2G as a resource in this iteration of the

filing requirements would be premature. As the utilities note, there are currently no industry-accepted data sources from which to model the impact of EVs. However, the Commission encourages the utilities to consider modeling V2G as an energy and storage resource as data becomes available.

iv. Capacity and Reliability Requirements

Consumers recommends changing the word “finalized” to “applicable” as it is unclear what constitutes a finalized law. The Commission adopts Consumers recommendation.

v. Transmission Analysis

DTE Electric made adjustments to the language of this section to account for the fact that because they are utilities, the companies will be receiving transmission information from their respective RTO or ISO. The Commission recognizes that the companies’ access to certain transmission information is limited and that the companies will depend on the local transmission owner or RTO to provide the information. As such, the Commission adopts DTE Electric’s recommendations.

vi. Modeling Results

Consumers recommends the phrase “incremental” be added before “revenue requirements” and DTE Electric proposes that the term “incremental” be added before “present value” in subsection (b). No parties objected to these additions. The Commission finds that these changes do not alter the underlying meaning of the requirements and thus, adopts the proposed additions here and in later sections.

DTE Electric proposes the phrase “of the PCA” be inserted into subsection (f). The Commission finds that it may be appropriate to analyze the impact of alternative resource plans on

the resource adequacy for the resource zone. The Commission declines to limit the scope of this requirement to the PCA.

ABATE proposes the addition of language in subpart (f) requiring that the utility demonstrate that its PCA, and any alternative resource plan, meet all applicable resource adequacy requirements. The Commission has adopted language, outlined above, requiring utilities to include a LRR analysis of the proposed resource plan in the IRP filing. The Commission declines to adopt ABATE's language as proposed.

vii. Proposed Course of Action

Michigan Biomass discussed the need to address “diversity in the mix of generation resources” and in its comments, asked the Commission to ensure that diverse energy resources get a full and fair review in the MIRPP. Michigan Biomass's comments, p. 3 (emphasis omitted). Additionally, the SEA states that “[t]he new integrated resource planning (IRP) framework administered by the [Commission] requires consideration of fuel diversity in planning future electricity supplies for investor-owned utilities.” SEA Final Report, p. 13. As such, the Commission adopts Michigan Biomass's recommendation to include an analysis of generation diversity in the filing requirements and includes a requirement for the company to provide a qualitative discussion of the impact of the PCA on the diversity of the company's resource portfolio.

viii. Rate Impact and Financial Information

The Joint Commenters recommend adding two new subsections, (j) and (k). The new subsections would require the utility to project rates and average monthly residential customer bills under each scenario based on currently approved rate structures. The Commission finds that an IRP is not the proper proceeding for this analysis. An IRP does not include the cost of service

to customers. To determine the cost of service across customer classes, the utility would need to make assumptions about expected load changes and new resources that are too attenuated to create an accurate analysis. The Commission declines to adopt the Joint Commenters' proposed additions.

ix. Financing Options for Retirement

Subsection XXI requires utilities include an analysis of various financing options for the remaining book balance of any retiring generation facility. Consumers recommends this section be removed from the filing requirements as it "references undefined and unlimited 'various financing options'" and the company will not know precisely how to comply with the proposed requirement. Consumers' comments, p. 8. DTE Electric suggests changing the language of subsection (b). The Commission adopts Consumers' recommendation to remove Section XXI.

x. Environmental Considerations and Environmental Justice

DTE Electric suggests that the Commission expand the carbon accounting methodology beyond those identified in the Revised IRP Filing Requirements to account for new methodologies addressing carbon accounting that may emerge. The Commission adopts DTE Electric's proposed recommendation to expand the methodologies.

xi. Appendix 1

Consumers recommends removing the requirement in subsection (a) of Section I of Appendix 1 that the utility's previously approved portfolio be run in MIRPP scenario 1. The Commission defers to EGLE on this requirement and thus does not adopt the recommended revision.

The Joint Commenters suggest a requirement be added to Section III that utilities conduct an environmental justice screening of vulnerable populations within 12 miles of each facility. The Commission again defers to EGLE on the radius provided for the analysis. The Commission declines to adopt the additional requirement proposed by the Joint Commenters.

DTE Electric comments for clarification on whether the term “facilities” in section III includes peaking units. The Commission has clarified the language of the requirement that “facility” and “facilities” do include peaking units.

DTE Electric recommends Section VI be amended to include an unchanged level of PM_{2.5} emissions. Consumers recommends Section VI be deleted in its entirety. The Joint Commenters suggest the dispersion modeling requirement include SO₂ and NO_x emissions in addition to PM_{2.5}. The Commission has confirmed these requirements with experts at EGLE and thus declines to make changes at this time.

G. Other Issues

ABATE proposes a new section be added to the IRP Filing Requirements to “ensure the outcome of an IRP proceeding can be evaluated against the Company’s filed PCA in terms of the IRP filing requirements and the considerations set out in MCL 460.6t(8)(a).” ABATE’s comments, p. 3. The utilities’ comments state that the IRP procedure is outlined in Act 341. The Commission also recognizes the concerns of DTE Electric and Consumers that additional modeling would delay an actionable outcome to the resulting IRP. Therefore, the Commission declines to include this additional section in the IRP Filing Requirements.

THEREFORE, IT IS ORDERED that:

A. The Revised Integrated Resource Plan Filing Requirements, included as Attachment A, are approved as amended.

B. This order applies to utilities filing integrated resource plans on or after November 21, 2022.

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, pursuant to 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 pungpl@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

Daniel C. Scripps, Chair

Tremaine L. Phillips, Commissioner

Katherine L. Peretick, Commissioner

By its action of October 27, 2022.

Lisa Felice, Executive Secretary

Revised
Integrated Resource Plan
Filing Requirements

Pursuant to Public Act 341 of 2016, Section 6t

October 27, 2022

Application Instructions for Integrated Resource Plan Filings

These application instructions apply to a standard electric utility application for Michigan Public Service Commission (MPSC or Commission) approval of an Integrated Resource Plan (IRP) under the provisions of MCL 460.6t, as well as an IRP that may be filed under the provisions of MCL 460.6s.¹ The application shall be consistent with these instructions, with each item labeled as set forth below. Any additional information considered relevant by the utility may also be included in the application.

Schedule

A utility shall coordinate with the Commission Staff (Staff) in advance of filing its application to avoid resource challenges with IRP applications being filed at the same time as IRP applications filed by other utilities. A utility may be requested to delay its IRP application to preserve a 21-day spacing between IRP applications.

Following the initial IRP applications, the utilities shall comply with all future filing deadlines directed by the Commission and shall continue to coordinate with the Staff to schedule future IRP application filing dates.

Filing Announcement

To facilitate the scheduling and preparation of IRP proceedings, a utility, who intends to file an IRP on a date other than its scheduled filing date, shall file a filing announcement, in a new docket, at least 30 calendar days prior to the proposed filing. The filing announcement, along with a proof of service, shall be served on all parties granted intervention in the utility's last IRP case and the utility's last electric rate case. If the IRP described in the filing announcement is not filed within 120 days after filing of the announcement, the filing announcement will be considered withdrawn. If a certificate of necessity (CON) is also being filed; the same filing announcement would serve as the filing announcement required for the CON.

The filing announcement shall include:

¹ Variations from the standard instructions may occur as allowed by MCL 460.6t(4) for multistate utilities and those serving fewer than 1 million Michigan customers.

- a) Statement of intent to file an IRP;
- b) Estimated date of filing;
- c) Information related to any stakeholder engagement meetings that have already taken place or are scheduled to take place; and
- d) Information related to any CON application that would be filed with the utility's IRP.

The Commission may, if necessary, order a delay in filing an application to establish a 21-day spacing between filings. The filing announcement shall be submitted at least 30 calendar days prior to the IRP application, thus providing the Commission with sufficient time to issue an order regarding the 21-day spacing if it so chooses.

Pre-Filing Request for Proposals

Each electric utility whose rates are regulated by the Commission shall issue a request for proposal (RFP) to provide any new supply-side capacity resources needed to serve the utility's reasonably projected electric load, applicable planning reserve margin, and local clearing requirement for its customers in this state, as well as customers located in other states but served by the utility, during the initial three-year planning period to be considered in each IRP to be filed, as outlined in MCL 460.6t.

The utility shall comply with the following:

- a) The utility shall include with the IRP application documentation demonstrating that the RFP process was completed;
- b) The utility's RFP process is subject to audit by the Staff;
- c) The IRP filing shall include evidence that the pre-filing RFP process was conducted in a manner consistent with the Commission's code of conduct, and applicable state, federal, and Commission rules, and any adherence with the competitive procurement guidance in Case No. U-20852;
- d) The RFP shall allow for proposals of sizes smaller than the total capacity need such that a combination of projects are needed, including but not limited to distribution connected resources, would be needed to provide new supply-side capacity, pursuant to MCL 460.6t(6); and
- e) The RFP shall allow for proposals to provide new supply-side capacity in the form of a purchase power agreement for a period that is the lesser of the study period or of the

useful life of the resource type proposed.

Stakeholder Engagement and Public Outreach Process

Participant engagement early in the development of the IRP is strongly encouraged to: (1) educate potential participants on utility plans; (2) utilize a transparent decision- making process for resource planning; (3) create opportunity to provide feedback to the utility on its resource plan; (4) encourage robust and informed dialogue on resource decisions; and (5) reduce utility regulatory risk by building understanding and support for utility resource decisions. The utility may choose to incorporate some, or all, of the participant input in its analysis and decision-making for the IRP filing.

In the 12 months prior to the IRP filing, each utility is encouraged to host update workshops with interested participants. The purpose of the pre-filing workshop(s) is to ensure that participants have an opportunity to provide input and stay informed regarding: (1) the assumptions, scenarios, and sensitivities; (2) the progress of the utility’s IRP process; and (3) plans for the implementation of the proposed IRP. Documentation demonstrating the public outreach process undertaken by the utility shall be included with the IRP filing. Documentation should include:

- a) Workshop dates and times, including times outside of the workday;
- b) Evidence that a notice of the workshops was provided to the public;
- c) Meeting minutes;
- d) Meeting or workshop attendance lists;
- e) Participant comments on the last approved IRP and/or inputs into the proposed IRP application;
- f) Discussion indicating if or how the public outreach process influenced the IRP; and
- g) Include descriptions of community outreach efforts for overburdened communities in the Company’s service territory. Overburdened communities should be identified using the MI EJ Screening Tool or other tools as noted in the Section XVIII.

A minimum of two stakeholder engagement workshops are recommended. A stakeholder engagement workshop will provide stakeholders with an opportunity to provide input regarding the utility’s assumptions, inputs, and modeling methodologies employed during the development of the IRP. The utility is encouraged to invite stakeholders, including expected intervenors and the Staff, to its stakeholder engagement workshops.

If the stakeholder engagement workshops are not open to the public, two additional hybrid public meetings with the option for both virtual and in-person attendance are recommended. The public meetings are intended to educate the public on the utility's planning process as well as provide an opportunity for the public to comment. The public meetings should be offered in the utility's service territory in geographic locations convenient to customers, with advanced notice provided to customers in the utility's service territory. This should include community-based organizations. The utility is encouraged to consider holding public meetings after normal business hours to encourage attendance.

The public meetings should be conducted in a manner accessible to those with disabilities including those that are hearing and visually impaired. The public meetings should also be available to those whose first language is not English upon request and to the extent practical.

If the utility chooses to hold pre-filing workshops, including stakeholder engagement workshops or public meetings, the utility shall prepare a public outreach report to document the outcomes of any pre-filing workshops, and shall file the report with the IRP application.

All presentations, recordings, comments, and transcripts from those presentations open to the public should be maintained on a website in a location open to the public for the duration of the stakeholder outreach process and the duration of the IRP case, until a final commission order is published.

Risk Assessment Methodology

The utility's IRP filing shall include a thorough risk assessment of the proposed resource plan and the optimal plans for each of the scenarios specified in the Michigan Integrated Resource Planning Parameters (MIRPP), all additional utility developed scenarios and utility developed sensitivities related to early retirement that are filed with the IRP application. The utility submitted alternative build plans should be feasible and differ in generation mix from the proposed resource plan and MIRPP plans.

The intent of the risk assessment is to test the optimized resource strategies for each scenario and the proposed course of action (PCA) to determine how each strategy would perform in an unexpected range of possible futures. The utility shall provide detail on how the risk assessment was conducted, including the impact of atypical weather conditions that occur at least as

frequently as once in ten years.^{2,3} Utilities are encouraged to link variables that can be shown to have correlation or dependencies with each other.

The IRP shall include a discussion of the methodology used for risk assessment including the utility's justification for the chosen methodology over other alternatives. Acceptable forms of risk assessment include, but are not limited to, the following: scenario analysis, global sensitivity analysis, stochastic optimization, generating near-optimal solutions, agent-based stochastic optimization, mean-variance portfolio analysis, and Monte Carlo simulation.

Utilities with one million customers or more, shall include a Local Reliability Requirement (LRR) analysis of the proposed resource plan in the IRP filing. The LRR analysis shall provide a five-year outlook of the LRR in the local resource zone. The analysis shall be conducted consistent with the resource adequacy construct used by the RTO/ISO. The purpose of this calculation is to estimate the marginal impact of the utility's proposed resource plan on the resource adequacy of the local resource zone during the first five years of the plan.

Confidential Information

Transparency and the use of data that can be shared with the Commission, the Staff, and intervenors is encouraged. Proprietary, confidential, and other nonpublic materials used in the development of the forecasts, scenarios, or other aspects of the IRP shall be presented in such a way that the proprietary and confidential nature of the materials is preserved. The use of publicly available data and materials is encouraged in lieu of proprietary and confidential materials and claims that information is proprietary or confidential should be justified by the utility.

Inclusion of specific materials in the IRP filing may be contingent upon appropriate confidentiality agreements and protective orders. Proprietary, confidential, and other nonpublic materials filed as part of the IRP shall be clearly designated by the utility as confidential.

² Summary Climate Information, <https://glisa.umich.edu/summary-climate-information/>

³ Tools for Tracking Climate Change, <https://ccr.nelson.wisc.edu/>

Definitions

The following definitions are provided to aid in ensuring consistency across planning processes.

Distributed Energy Resources - A source of electric power and its associated facilities that is connected to a distribution system. Distributed Energy Resources (DER) includes both generators and energy storage technologies capable of exporting active power to a distribution system.

Non-Wires Alternatives - An electricity grid investment or project that uses distribution solutions such as DER, energy waste reduction (EWR), demand response (DR), and grid software and controls, to defer or replace the need for distribution system upgrades.

Overburdened Communities – Refers to overburdened, vulnerable, underserved or disadvantaged communities that are identified in accordance with metrics and percentiles as recommended by the specific environmental justice screening tool used. It is preferred that utilities use MiEJScreen tool to the extent practicable.

Demand-Side Resources - Resources serving resource adequacy needs by reducing or shifting load, which reduces the need for additional generation, including but not limited to EWR, DR, grid and software controls, behind-the-meter distribution connected storage, etc.

Co-Benefits – Benefits that are quantified as part of another planning process that are important for the justification of a resource included in the IRP. Examples include benefits to distribution planning or transmission planning.

Approval of Costs

For the Commission to specify the costs to be approved for the construction of or significant investment in supply or demand-side resources, or contractual agreements, excluding short-term market capacity purchases to meet state reliability mechanism capacity requirements, in accordance with MCL 460.6t(11) through (12), the following information, data, and documents shall be provided:

For specific supply-side resources (inclusive of storage technologies), that are planned to commence within three years following the approval of the IRP, the following evidence (covering the lifespan of the project) shall be provided:

- a) A description of the plant size, type, and summary of engineering/design specifications. The description shall also include the following:
 - i. Description of fuel use, both primary and back-up, and provisions for transporting and storing fuel;
 - ii. Projected annual costs, in accordance with the breakdown specified in the Federal Energy Regulatory Commission Uniform System of Accounts; and
 - iii. Annual depreciation on the capital investment.
- b) Projected annual return and income taxes on capital investment;
- c) The operation and maintenance (O&M) costs over the life of the facility described as costs which are variable, in current dollars per kilowatt-hour (kWh), with expenses for fuel and non-fuel items indicated separately; and costs which are fixed, in current dollars per kilowatt (kW);
- d) Projected property taxes;
- e) The rates of escalation of cost, including:
 - i. Capital costs;
 - ii. O&M costs which are variable and related to fuel;
 - iii. O&M costs which are variable and unrelated to fuel; and
 - iv. O&M costs which are fixed.
- f) The total annual average cost per kWh at projected loads in current dollars for each year of the plan for the proposed facility;
- g) Equivalent availability factors, including both scheduled and forced outage rates;
- h) Capacity factors for each year in the planning period;
- i) Operation cycle (i.e., baseload, intermediate, or peaking), identifying expected hours per year of operation, number of starts per year, and cycling conditions for each year in the planning period;
- j) Heat rates (efficiency) for various levels of operation;
- k) Unit lifetime, both for accounting book purposes and engineering design purposes, with explanations of differences;

- l) Lead time, separately identifying the estimated time required for engineering, permitting and licensing, design, construction and pre- commercial operation date testing;
- m) Potential socioeconomic impacts, such as employment, for the local region of the proposed supply-side resource, construction of or significant investment in an electric generation facility, or the purchase of an existing electric generation facility;
- n) Procurement strategy, including power purchase agreements (PPAs) and company owned, and any adherence to the most recent Commission approved Competitive Procurement Guidance; and
- o) A summary description of the expected decommissioning process, costs, and how the utility intends to provide assurance of proper disposal with consideration of material salvage and recycling for proposed new resources.

Renewable Resources: The utility shall file data consistent with any approved renewable procurement plan. Revenue requirement and incremental costs shall be calculated to include the following:

- a) Capital, O&M costs for renewable energy systems (including property taxes and insurance for renewable energy systems);
- b) Financing costs;
- c) Costs that are not otherwise recoverable in base rates including interconnection and substation costs;
- d) Cost of purchased renewable energy credits (RECs) other than those purchased for non-compliance;
- e) Cost of Contracts;
- f) Expenses incurred as a result of governmental action including changes in tax or other laws;
- g) Subtract revenues (i.e., transfer price, environmental attributes, interest on regulatory liability, etc.) through 2029;
- h) Recovery to include the authorized rate of return on equity, which will remain fixed at the rate of return and debt to equity ratio that was in effect in base rates when the renewable plan was approved (only through 2029);
- i) Provide the following information in relation to renewable resource cost recovery:

- i. Forecast through the end of the renewable plan period of the non-volumetric surcharge; and
- ii. Forecast through the end of the renewable plan period of the regulatory liability balance.
- j) Procurement strategy, including PPAs and company owned. Address whether the procurement strategy adhered to the most recent Commission approved Competitive Procurement Guidance; and
- k) A summary description of the expected decommissioning process, costs, and how the utility intends to provide assurance of proper disposal with consideration of material salvage and recycling for proposed new renewable resources.

EWR: The utility shall provide the following information in relation to EWR programs cost approval and recovery. For each individual program or group of programs, provide:

- a) Total annual cost including:
 - i. Annual O&M cost for each individual portfolio of EWR programs;
 - ii. Annual capital cost for each individual portfolio of EWR; and
 - iii. Expected cost-sharing or financial incentive granted to the utility by the Commission.
- b) Total demand (MW) and energy (megawatt-hours (MWh)) reduction potential; and
- c) Total resource capacity (MW) and type reported to the applicable regional transmission organization (RTO) or independent system operator (ISO).

DR, DER Programs, and other demand-side resources: The utility shall provide the following information in relation to DR programs, DER programs, and other demand-side resources cost approval and recovery. For each individual program or group of programs, provide:

- a) Total annual cost including:
 - i. Annual O&M cost for each individual program of DR, DER, and demand-side programs;
 - ii. Annual capital cost for each individual program of DR, DER, and demand-side programs; and
 - iii. Expected cost-sharing or financial incentive granted to the utility by the Commission.
- b) Total demand reduction potential (MW), including the amount of load reduction and the expected hours of interruption per day, month, and year for each program, if applicable;

- c) Maximum single event demand reduction;
- d) Total resource capacity (MW) and type (load modifying resource, emergency DR, etc.) reported to the applicable RTO or ISO;
- e) Total energy reduction achieved (MWh); and
- f) Description of program, including customer enrollment, technology used, and marketing plan.

Waivers and Process for Smaller and Multistate Utilities

An electric utility with fewer than 1,000,000 customers in this state may request a waiver to any portion of these IRP filing requirements. Any request for a waiver shall include a discussion and justification outlining why the waiver is warranted and in the best interest of its customers.

Discussion and justification for the requested waiver shall include a description of the utility's current and forecasted energy and capacity needs, and its plan for meeting those needs over the upcoming 10 years.

If the utility requires resolution of a waiver request prior to filing an IRP application, the utility shall file the waiver request no less than 60 days prior to the filing of the IRP application. An electric utility with fewer than 1,000,000 customers in this state may request approval from the Commission to file an IRP jointly with other smaller utilities. Commission approval is required prior to filing a joint IRP.

A non-multistate Michigan electric utility serving fewer than 1,000,000 customers may elect to file an IRP, based on its specific circumstances, that deviates from these requirements, but that is subject to the Staff's ability to request supplemental information. The filing shall include an explanation of why the deviations are reasonable under its circumstances. The Commission shall review any such filings under the traditional "just and reasonable" standard.

Northern States Power Company-Wisconsin and Indiana Michigan Power Company are utilities located in Michigan that already file multistate IRPs in other jurisdictions. Due to the provisions in MCL 460.6t(4) regarding multistate IRPs, Northern States Power Company-Wisconsin and Indiana Michigan Power Company may utilize the IRP filing requirements of another state in accordance with those provisions. However, the Commission reserves the right to request

additional information to facilitate its review of the IRP as it relates to Michigan.

IRP Filing, Data, and Documentation

The utility's IRP filing shall demonstrate compliance with MCL 460.6t and include the following items:

- a) Letter of transmittal expressing commitment to the approved resource plan and resource acquisition strategy and signed by an officer of the utility having the authority to commit the utility to the resource acquisition strategy, acknowledging that the utility reserves the right to make changes to its resource acquisition strategies as appropriate due to changing circumstances;
- b) Technical volume(s) that fully describe and document the utility's analysis and decisions in selecting its proposed resource plan and resource acquisition strategy;
- c) The data and information requested in the Commission's IRP Filing Requirements included herein; and
- d) Any other information deemed relevant by the utility.

The utility's IRP filing shall include an IRP document(s) and application information including testimony and exhibits that fully describes and documents the utility's analysis and decisions in selecting its proposed resource plan and resource acquisition strategy. To facilitate a similar format for each utility's application, the utility is encouraged to align its filing with this provided outline and include at least the following items:

I. Executive Summary: An IRP shall include an exhibit that serves as an executive summary, suitable for distribution to the public. The executive summary shall be an informative non-technical description of the resource plan proposed by the utility and resource acquisition strategy. The executive summary shall summarize the contents of the IRP document and shall include the following:

- a) An overview of the planning period examined in the IRP analysis and application;
- b) A brief introduction describing the utility, its existing facilities, new resources being proposed, and implementation strategy;
- c) A summary of the state, federal, ISO, RTO resource adequacy regulations applicable to the utility;
- d) A summary of the analytical approach used in the utility's analysis and the types of new

resources considered;

- e) A description of how the analytical approach considered potential resource co-benefits from other planning processes such as distribution or transmission planning;
- f) A summary of any retirement analysis performed;
- g) A description of how the environmental justice (EJ) analysis results influenced the utility's proposed course of action (PCA);
- h) The Company shall include a graph that depicts a stacked bar graph that includes the RTO/ISO capacity credit⁴ of all existing resources and PCA resource additions, color designated by resource type, that it will use to serve demand in each year for all planning years. The graph shall have a line representing expected demand over the length of the planning period with the inclusion of the necessary planning reserve margin;
- i) The Company shall include a graph that depicts a stacked bar graph that includes the annual energy expected to be produced by all existing resources, PCA resource additions, and market purchases for each year of the planning horizon. The graph shall be color designated by resource type. The graph shall have a line representing expected demand over the length of the planning period;
- j) The Company shall include a graph that summarizes the total of each of the following pollutants projected using the PCA in the MIRPP Scenario 1 for each year of the planning horizon. A graph should be included for nitrogen oxide (NO_x), sulfur dioxide (SO₂), particulate matter (PM), mercury (Hg), volatile organic compounds (VOC), carbon dioxide (CO₂). The graph should also depict the utility's progress toward or achievement of State, Federal and utility announced goals or requirements by including annotations for those goals on the years they apply;
- k) The Company shall include a discussion of the estimated costs of the PCA; and
- l) Any other information that would aid the public understanding of the utility's proposed resource plan.

II. Table of Filing Requirements:

The utility shall provide a table that clearly identifies the where in the filing it has met all the

⁴ For example, MISO Zonal Resource Credit.

filing requirements. It shall include locations in testimony, exhibits and workpapers.

III. Testimony Introduction: The utility shall describe resource plans to satisfy at least the objectives and priorities identified in MCL 460.6t. The utility may identify and/or describe additional planning objectives that the resource plan will be designed to meet. The utility shall describe and document its additional planning objectives and its guiding principles to design alternative resource plans that consider the planning objectives and priorities. The introduction shall include the following:

- a) General description of the utility's existing energy system, including:
 - i. Net present value revenue requirements (NPVRR),⁵ with and without any financial performance incentives for demand-side resources;
 - ii. Summary of existing generation and PPAs by fuel type;
 - iii. Utility's existing capacity resource mix;
 - iv. Utility's service territory and breakdown of customer class composition; and
 - v. Description of planning period analyzed;
- b) Statement of power need;
- c) Identify and explain the basis for the forecasted price of energy, capacity, and fuels, and of peak demand and energy requirements, for each year of the analysis used in each scenario and sensitivity evaluated by the utility as part of the IRP process;
- d) Market and regulatory environment influencing resource planning decisions:
 - i. RTO market and state regulation structure if a multistate utility;
 - ii. Potential changes to RTO capacity market;
 - iii. Electric customer choice;
 - iv. Transmission expansion;
 - v. Environmental;
 - vi. Renewable portfolio standards; and
 - vii. Other;
- e) IRP planning process; and

⁵ The assumed discount rate shall be included along with a justification for the assumed discount rate. Results should be presented in nominal dollars.

f) Stakeholder report.

IV. Analytical Approach:

- a) Describe the modeling process, including the duration of the study;
- b) The utility shall describe and identify how its model approach optimizes resources to meet load and demand for all times of the year and for each year of the planning horizons. The utility shall explain how the model considers the seasonal and operational characteristics of all resource types, including generation profiles, forced outages, facility derates, seasonal or limited availability of resources, etc;
- c) Describe and provide a justification for the risk assessment approach adopted from the Risk Assessment Methodology section:
 - i. The utility shall describe and document its quantification of the risk that affects the evaluation of the various resource plan options;
 - ii. The utility shall provide a tabulation of the key quantitative results of that assessment and a discussion of how those findings affected its decision on a resource plan; and
 - iii. If multiple forms of risk assessment are presented the utility shall explain why certain risk variables could not be included in or are unsuited for one type of risk assessment or another. Considering a risk variable under multiple forms of risk assessment is not discouraged.
- d) The utility shall describe and document the identification of risk variables and/or combinations of risk variables selected, their ranges, probabilities, ranking, and/or weighting that defines the risk quantification which the various resource plan options were judged; describe how these risk variables were judged to be appropriate and explain how these were determined; and describe the modeling tools and data sources employed during the capacity expansion, and other modeling processes; and
- e) Interactions between risk variables should be captured to the extent that it is practical. Evaluation of variables in isolation is acceptable so long as there exists a comprehensive evaluation of resource plans risks that captures interactions and shows overall risk of appropriate build plans. A comprehensive risk assessment should at least include optimized build plans from the required MIRPP scenarios, the proposed resource plan, and any alternative resource plans presented by the utility.

V. Integrated Resource Plan Scenarios and Sensitivities:

- a) Include a detailed description of all scenarios and sensitivities; and
- b) In addition to the utility's own scenarios and assumptions, the inclusion of the established modeling scenarios and assumptions in the MIRPP approved by the Commission in Case No. U-21219, or as revised by subsequent Commission orders related to IRP modeling parameters and requirements.

VI. Existing Supply-Side Resources: Detailed account of projected energy and capacity purchased or produced by the utility's owned and contracted resources, including cogeneration resources. Include data regarding the utility's current generation portfolio, including the age, capacity factor, licensing status, and remaining estimated time of operation for each facility in the portfolio:

- a) Overview;
- b) Fossil-fueled generating units;
- c) Nuclear generating units;
- d) Hydroelectric generating units;
- e) Renewable generating units;
- f) Energy storage facilities;
- g) PPAs: energy and capacity purchased or produced by the utility from a contracted resource, including any cogeneration resource; and
- h) RTO/ISO capacity credits and modeling of existing units (such as capacity factor, heat rate, outage rate, in-service and retirement dates, operating costs, etc.).

VII. Demand-Side Resources: Historical and projected load management and DR programs for the utility in terms of MW and RTO or ISO Zonal Resource Credits (ZRCs) and the projected costs for those programs.

- a) Provide data on projected enrolled capacity and DR events for each program. The following items are to be included:
 - i. Description of current DR and load management programs for the IRP study horizon, including the amount of load reductions and the expected hours of interruption per day, month, and year for each program;
 - ii. Review the historic performance of existing demand-side programs in delivering benefits and how the utility used such information in its DR resource decisions;

- iii. Describe the utility's method for determining whether to purchase energy rather than relying on DR; and
- iv. A description of any other programs the utility is considering that could potentially expand DR resources, including expected load reductions and operating parameters.

VIII. Renewables and Renewable Portfolio Standards Goals: Projected energy purchased or produced by the utility from renewable energy resources.

- a) Describe how the electric provider will meet existing renewable energy standards. If the level of renewable energy purchased or produced is projected to drop over the planning periods, the utility must demonstrate why the reduction is in the best interest of ratepayers;
- b) Specify whether the number of MWh of electricity used in the calculation of the REC portfolio will be the previous 12-month period of weather-normalized retail sales or based on the average number of MWh of electricity sold by the electric provider annually during the previous three years to retail customers in this state;
- c) Include the expected incremental cost of compliance with existing renewable energy standards for the required compliance period;
- d) A description of how the electric provider's plan is consistent with the renewable energy goals required by the Michigan Legislature (e.g. 35% combined renewable energy and EWR goal by 2025);
- e) Describe the options for customer-initiated renewable energy that will be offered by the electric provider and forecast sales of customer- initiated renewable energy;
- f) Describe how the electric provider will meet the demand for customer- initiated renewable energy, and;
- g) Describe how the electric provider has included develop distributed generation as a resource within it's modeling, including interconnection to utility distribution as well as behind-the-meter.

IX. The following non-exhaustive list suggests several elements that may be included:

- a) Sales forecast from the first year of the study period through 2025 toward meeting the 35% goal, and through the study period.
- b) Detailed resource plan:

- i. Describe the utility's planned REC portfolio;
- ii. Forecast RECs obtained via Michigan incentive RECs;
- iii. Forecast expected compliance levels by year to meet the renewable portfolio targets;
- iv. Identify key assumptions used in developing these forecasts and the proposed resource portfolio; and
- v. Identify risks which may drive performance to vary.

X. Peak Demand and Energy Forecasts: A long-term forecast of the utility's sales and peak demand under various reasonable scenarios. Include details regarding the utility's plan to eliminate energy waste, including the total amount of EWR expected to be achieved annually, and the cost of the plan:

- a) A forecast of the utility's peak demand and details regarding the amount of peak demand reduction the utility expects to achieve.
- b) Subsections:
 - i. Key variables used to develop forecast;
 - ii. Long-term forecasting methodology;
 - iii. Forecasting uncertainty and risks;
 - iv. Historical growth in electric sales for the previous five years, including a record of its previous load forecasts (can be supplied in workpapers);
 - v. Base Case deliveries and demand forecast;
 - vi. Alternative forecast scenarios and sensitivities in accordance with the Commission's final order in Case No. U-21219, or subsequent Commission orders relating to IRP modeling parameters and requirements;
 - vii. Describe in detail about how the forecasts used for IRP modeling align with forecasts used for distribution planning;
 - viii. Detail information about DER adoption;
 - ix. Detail electric vehicle adoption assumptions and impacts to overall peak demand and energy forecasts; and
 - x. Detail additional electrification adoption assumptions and impacts to overall peak demand and energy forecasts.

XI. Capacity and Reliability Requirements: The utility shall indicate how it complies, and will comply, with all applicable state, federal, ISO, RTO capacity and reliability regulations, laws,

rules, and requirements, (such as planning reserve margins, system reliability and ancillary service requirements) including the projected costs/revenues of complying with those regulations, laws, and rules. The utility shall identify any applicable changes to the applicable state, federal, or local laws, rules, and regulations. The utility shall also identify any major ISO, or RTO capacity and reliability requirements that have occurred since its last IRP filing, including narrative that identifies how its PCA satisfies those requirements. The utility shall include data regarding the utility's current generation portfolio, including the age, capacity factor, licensing status, and remaining estimated time of operation for each facility in the portfolio.

XII. Transmission Analysis: In accordance with MCL 460.6t(5)(h), the utility shall work with their local transmission owner to include an analysis of potential new or upgraded electric transmission options for the utility. The utility's analysis shall include the following information:

- a) The utility shall work with their local transmission owner to assess the need to construct new, or modify existing transmission facilities to interconnect any new generation and shall reflect the estimated costs of those transmission facilities in the analyses of the resource options;
- b) In collaboration with the incumbent transmission owner, include an analysis of any co-benefits of storage, specifically the transmission system benefits associated with transmission interconnected storage that is not designated as "storage as transmission only asset;"
- c) A detailed description of the utility's efforts to engage local transmission owners throughout the utility's IRP process. In an effort to inform the IRP process and assumptions, a meeting schedule in coordination with the transmission owner should be determined that supports engagement through the process. The filing should include a summary including meeting dates, number of meetings and how the engagement influenced the utility's decisions;
- d) Detailed meeting minutes for utility/transmission owner meetings should include any requested studies, discussions about assumptions and any conclusions made during the meeting, alternatives that were reviewed, any other pertinent information that can be made public or provided through typical contested case confidentiality agreements;

- e) Current transmission system import and export limits as most recently documented by the RTO and any local area constraints or congestion concerns;
- f) To the extent available, any information provided by their local transmission and RTO owner indicating the anticipated effects of fleet changes proposed in the transmission system, including both generation retirements and new generation, subject to confidentiality provisions; Any information provided by their local transmission owner, including cost and timing, indicating potential transmission options that could impact the utility's IRP by: (1) increasing a local resource zone's (LRZ) import or export capability; (2) facilitating PPAs or sales of energy and capacity both within or outside the planning zone or from neighboring RTOs; (3) transmission upgrades resulting in increasing system efficiency and reducing line loss allowing for greater energy delivery and reduced capacity need; and (4) advanced transmission and distribution network technologies affecting supply-side resources or demand-side resources; (5) estimated interconnection costs for new resources (6) potential siting locations that may provide transmission system benefits;
- g) In collaboration with their local transmission owner, to the extent available, any information regarding (1) identification of system locations or regions where energy resources can interconnect to the transmission system with minimal transmission investment, (2) recent studies, to the extent that they are available, that indicate ways in which the capacity import or export capabilities can be increased or may change and the resulting impacts to the local clearing requirement;
- h) Any transmission studies performed by their local transmission owner that support the resource plan proposed by the utility;
- i) In conjunction with the local transmission owner, provide an analysis of transmission costs for access to out of state resources conducted by either the RTO, transmission owner(s), and/or utility; and
- j) Provide RTO reports or web links to report locations that contain information relied upon to support transmission related model assumptions.

XIII. Fuel: The utility shall include the following:

- a) Overview;
- b) Natural gas price forecasts under the various scenarios;

- c) Oil price forecasts under the various scenarios;
- d) Coal price forecasts under the various scenarios;
- e) Delivered natural gas prices to existing and new utility-owned generating plants;
- f) Delivered oil prices to existing and new utility-owned generating plants;
- g) Delivered coal prices to existing and new utility-owned generating plants;
- h) Projected annual fuel costs under the various scenarios;
- i) The projected long-term firm gas transportation contracts or natural gas storage the utility will hold to provide an adequate supply of natural gas to any new and existing generation facility; and
- j) Any other fuels used for electric generation by the utility.

XIV. Resource Screen: Describe the utility's options of resources, including combinations of resources constructed as a single facility (such as storage combined with a generation source), to serve future electric load such as utilizing existing and planned resources, build a new facility, purchasing capacity from the market on a short-term basis, and purchasing capacity through a PPA. The following sections shall discuss each option in detail and options shall be considered in combination to serve future electric load. As described below, workpapers with information on the costs and performance data of each modeled resource option and combination of resource options shall be provided with the utility's filing:

- a) Existing and approved resources;
- b) New build:
 - i. New generation technology and operating assumptions;
 - ii. New generation development costs;
 - iii. New storage technology and operating assumptions;
 - iv. New energy storage development costs; and
 - v. Development costs and operating assumptions for combinations of resources constructed as a single facility;
- c) DERs inclusive of non-wires alternatives (NWA) identified in other planning processes;
- d) Demand-side Resources inclusive of NWAs identified in other planning processes;
- e) Market capacity purchases:
 - i. Regional market supply outlook;
 - ii. Availability of market capacity; and

- iii. Market capacity price assumptions;
- f) Long-term PPAs; and
- g) Transmission resources:
 - i. Overview;
 - ii. Existing import and export capability;
 - iii. Transmission network upgrade assumptions for the IRP; and
 - iv. Import and export impact on resource strategy.

XV. Modeling Results: An analysis of the capital costs, energy production, energy production costs, fuel costs, energy served, capacity factor, emissions (levels and costs), and viability of all reasonable options available to meet projected energy and capacity needs, including, but not limited to, existing electric generation facilities in this state. The following suggest specific items to be included. They are not exhaustive.

- a) Description of IRP portfolio design strategy (portfolio optimized for least cost, value maximization, reliability, risk minimization, environmental specification etc., or a particular combination);
- b) Results for all MIRPP required scenarios and sensitivities, additional utility scenarios and sensitivities, and the proposed resource plan that include annual incremental revenue requirements, incremental present value of annual revenue requirements and net present value of revenue requirements, and portfolio capacity including additions and retirements. Include monthly and annual energy pricing, and resource capacity and load factors;
- c) Base case portfolio options to be selected from;
- d) Analysis of IRP results;
- e) Risk assessment is presented with graphics and data that illustrate the results of any stochastic risk analysis performed such that the probability distributions are clearly defined along with relative positions of the distributions so that plans can be directly compared on a single graph. The use of a box and whisker plot and/or efficient frontier plot is recommended; and
- f) Impacts on resource adequacy for the resource zone.

XVI. Proposed Resource Plan: Include a detailed description of:

- a) The type of generation technology proposed for a generation facility or combination of

resources constructed as a single facility contained in the plan and the proposed capacity of the generation facility or combination of resources constructed as a single facility, including projected fuel costs under various reasonable scenarios;

- b) Plans for meeting current and future capacity needs with the cost estimates for all proposed construction and major investments, including any transmission or distribution infrastructure that would be required to support the proposed construction or investment, and PPAs;
- c) The projected long-term firm gas transportation contracts or natural gas storage the utility will hold to provide an adequate supply of natural gas to any new generation facility; and
- d) How the utility will meet local, state, and federal laws, rules, and regulations under the PCA;
- e) The impact of the proposed course of action on the diversity of the Company's resource portfolio. Include details in a qualitative discussion.

XVII. The utility shall describe the process used to select the proposed resource plan, including the planning principles used by the utility to judge the appropriate tradeoffs between competing planning objectives and between expected performance and risk. The utility shall describe how its proposed resource plan satisfies the following:

- a) Strike an appropriate balance between the various planning objectives specified;
- b) Utilize renewable and demand-side resources to comply with existing laws, goals and, in the judgment of the utility, are consistent with the public interest to achieve state energy policies;
- c) In the judgment of the utility, the proposed resource plan, in conjunction with the deployment of DR measures, has sufficient resources to serve load forecasted for the implementation period;
- d) A NPVRR comparison of its proposal and reasonable alternatives over the planning period utilized in the analysis. It shall also include the calculation and comparison of the NPVRR of the utility's proposed resource plan and any alternative resource plans including the alternative resource plans resulting from the Commission-approved modeling scenarios. In addition, the utility shall provide support for its chosen discount rate and discuss how the results of its analysis would change with different discount rate assumptions;

- e) A detailed analysis of any benefits from resources that provide co-benefits to distribution or transmission planning (such as reliability and resilience benefits) when those benefits are unable to be captured through capacity expansion modeling runs, to the extent that the co-benefits were relied upon for justification of resource decisions;
- f) Include a detailed analysis for any resource type that the utility utilized an analysis outside of the integrated resource model to determine net-cost, external benefits, and additional value streams:
 - i. Detail the net-cost method used when modeling any resource, where presumed benefits are netted against the costs of a resource to account for benefits outside of the model, a complete account of costs and assumed benefits should be provided such that the metrics and value given to achieving those metrics is clear and transparent;
 - ii. Detail benefits and value streams that are outside of the model that are included in the utility justification for a resource. A detailed analysis should be transparently included in the utility filing; and
 - iii. Detail how the utility considered whether benefits applied to one resource type are or are not also attributable to other resources.

XVIII. The utility shall develop an implementation plan that specifies the major tasks, schedules, and milestones necessary to implement the proposed resource plan over the implementation period. The utility shall describe and document its implementation plan, which shall contain:

- a) A schedule to report the status of an approved plan in accordance with MCL 460.6t(14);
- b) A schedule and description of actions to implement ongoing and planned demand-side programs and demand-side rates;
- c) A schedule and description of relevant supply-side resource research, engineering, retirement, acquisition, and construction;
- d) A description of how, to the extent practical, the construction or investment in new resources in this state will be completed using a workforce composed of residents of this state; and
- e) A description of, to the extent practical, the construction of new resources in this state will be completed using materials sourced from this state.

XIX. Rate Impact and Financial Information: Projected year-on-year impact of the PCA (and

other feasible options) for the periods covered by the plan, covering the following accounts:

- a) Incremental Revenue requirement;
- b) Rate base;
- c) Plant-in-service capital accounts;
- d) Non-fuel, fixed O&M accounts;
- e) Non-fuel, variable O&M accounts;
- f) Fuel accounts;
- g) Emissions cost;
- h) Effluent additive costs; and
- i) Projected change in generation plant-in-service.

XX. The utility shall describe the financial assumptions and models used in the plan. The resource plan shall include, at a minimum, the following financial information, together with supporting documentation and justification:

- a) The general rate of inflation;
- b) The allowance for funds used during construction rates used in the plan;
- c) The cost of capital rates used in the plan (debt, equity, and weighted) and the assumed capital structure;
- d) The discount rates used in the calculations to determine present worth;
- e) The tax rates used in the plan;
- f) NPVRR for the plan;
- g) Nominal incremental revenue requirements by year; and
- h) Average system rates per kWh by year.

XXII. Environmental Considerations and Environmental Justice: Describe how the utility's resource plan and any alternative resource plans presented in the application will comply with all applicable local, state, and federal environmental regulations, laws, and rules.

- a) Include a list of all environmental regulations that are applicable to the utility fleet. Identify which regulations apply to which resources;
- b) Include all capital costs for compliance with new and reasonably expected environmental regulations for existing fleet assets in the utility IRP;
- c) Include a chart that compares the total projected carbon emissions under each scenario analyzed (no sensitivities applied), including quantifying the carbon emissions projected

in each sensitivity as a percentage of the carbon emissions presented in the base scenario associated with that sensitivity. The utility shall identify and justify its use of a carbon accounting methodology identified in Electric Power Research Institute, Methods to account for Greenhouse Gas Emissions Embedded in Wholesale Power Purchases or other Commission approved methodology;⁶

- d) If the Company is proposing retirement of an existing resource due to an environmental regulation, clearly identify the future capital cost for environmental regulations and other capital investments in the facility. If costs are identified as avoided capital costs, provide sufficient detail to support the capital cost as avoidable, meaning dollars will never be spent, or capital cost will simply be transferred to another cost category. For example, becoming cost of removal, or fully avoidable capital costs;
- e) Hold a technical conference with MPSC and Department of Environment, Great Lakes, and Energy (EGLE) staff within 30 days after the filing to discuss the environmental and emission related data included in the filing testimony, exhibits, and workpapers; and
- f) Identify, quantify, and provide evidence in the filing that shows progress in meeting any state, federal or utility announced carbon reduction goals. Illustrate how each optimized build plan for each MIRPP scenario (no sensitivities applied), the proposed resource plan, and the previously approved plan perform in meeting those goals throughout the planning period.^{7, 8}

XXIII. Exhibits and Workpapers: The filing shall include exhibits and workpapers as outlined

⁶ Electric Power Research Institute, Methods to account for Greenhouse Gas Emissions Embedded in Wholesale Power Purchases, <https://ghginstitute.org/wp-content/uploads/2019/04/EPRI-Wholesale-Power-Report-Published-2019.pdf>, March 2019.

⁷ Governor Gretchen Whitmer signed Executive Directive 2020-10 (ED 2020-10) regarding the urgent threat to the environment, economy, and the health and well-being of Michigan's residents posed by climate change and its implications. ED 2020-10 committed Michigan to pursuing a reduction of at least 26 to 28 percent in Greenhouse Gas (GHG) emissions below 2005 levels by 2025 and economy-wide carbon neutrality to be achieved no later than 2050 and maintained thereafter.

⁸ April 22, 2021, President Joe Biden announced carbon reduction targets for the United States building upon carbon reductions to date. The new targets call for an economy-wide net GHG reduction of 50 to 52 percent from 2005 levels by 2030 and net zero GHG emissions economy-wide by no later than 2050.

below, subject to any license or other confidentiality restrictions that are unable to be resolved by issuance of a protective order.

- a) The Company shall include an exhibit containing a table that designates where each filing requirement is included within its testimony, exhibits, and workpapers with appropriate page and section numbers;
- b) The Company shall include an exhibit that depicts a stacked bar graph that includes the RTO capacity credit of all existing resources and new resources for all scenarios and sensitivities, color designated by resource type, in each of the planning years. The graph shall have a line representing expected demand over the length of the planning period with the inclusion of the necessary planning reserve margin;
- c) The Company shall include an exhibit of stacked bar graphs that include the energy expected to be produced by all existing resources, new resources, and market purchases for each planning year and for all MIRPP required scenarios and sensitivities. Each graph shall be color designated by resource type. Each graph shall have a line representing expected demand over the length of the planning period;
- d) Include a chart that compares the total projected carbon emissions under each scenario and sensitivity analyzed, including quantifying the carbon emissions projected in each sensitivity as a percentage of the carbon emissions presented in the base scenario associated with that sensitivity. The utility shall identify and justify which of the carbon accounting methodologies it used for all scenarios and sensitivities. The methodology should be one identified in Electric Power Research Institute, Methods to account for Greenhouse Gas Emissions Embedded in Wholesale Power Purchases or other Commission approved methodology;⁹
- e) Any workpapers used in developing the application, supporting testimony, and IRP. Such workpapers shall, when possible, be provided in electronic format with formulas intact;
- f) Any modeling input and output files used in developing the application, supporting

⁹ Methods to account for Greenhouse Gas Emissions Embedded in Wholesale Power Purchases, <https://ghginstitute.org/wp-content/uploads/2019/04/EPRI-Wholesale-Power-Report-Published-2019.pdf>, March 2019.

testimony, resource plan, and any alternative plans. Such modeling input and output files shall, when possible, be provided in electronic format with formulas intact. The utility shall also identify each modeling program used and provide information for how interested parties can obtain access to such modeling program. Modeling inputs and outputs in the model-dependent binary format should be made available to parties that obtain a license;

- g) Cost data, estimates, and co-benefit analyses that were used in the resource screening process or in any other way to determine resource selection of each resource that was considered either individually or in combination with other resources constructed as a single facility, including DERs, storage, and renewable energy resources;
- h) A description, including estimated costs of each alternative proposal received by the utility;
- i) A discussion of any differences between its short-term fuel price forecasts and capacity price curve in the IRP filing, and the short-term fuel price forecasts and capacity price curve in its last power supply cost recovery plan proceeding;
- j) Identification and justification of the forecasted price of energy, capacity, and fuels, and of peak demand and energy requirements used in the IRP. The utility shall identify its base case forecasts and a range of sensitivities for each such factor and explain how those sensitivities were identified. If the base case forecast(s) differs from recent previous forecasts submitted by the utility to the Commission in other cases, the utility shall provide an explanation for such differences;
- k) Present an environmental compliance strategy which demonstrates how the utility will comply with all applicable federal and state environmental regulations, laws, and rules. Included with this information, the utility shall analyze the cost of compliance on its existing generation fleet going forward, including existing projects being undertaken on the utility's generation fleet;
- l) Estimated annual emissions of CO₂ and greenhouse gases, particulates, SO₂, NO_x, and Hg per year and over the study period of the facilities included in their IRP;
- m) The assumed retirement dates of the facilities included in the IRP, with justification provided for the assumed retirement dates; and
- n) Other documents and data underlying the IRP analysis.

Appendix 1 Analysis Requested by EGLE to Inform Advisory Opinion

Purpose: Ensure the advisory opinion of EGLE in utility IRP cases is supported by a comprehensive health and environmental impact analysis in support of the State's environmental justice goals and Governor Whitmer's September 2020 Executive Directive 2020-10.

- I. Scope of portfolio build plans (herein referred to collectively as portfolios) evaluated as follows:
 - a) Portfolio 1: Previously approved portfolio (status quo; PCA in previously approved IRP) run in the MIRPP Scenario 1 (optimized through the current study period).
 - b) Portfolio 2: Utility PCA portfolio run in MIRPP Scenario 1.
 - c) Portfolio 3: Optimized portfolio in MIRPP Scenario 1.
 - d) Portfolio 4: Optimized portfolio in MIRPP Scenario 1 with high load sensitivity.
 - e) Portfolio 5: Reasonable alternatives to the PCA presented by the utility in MIRPP Scenario 1.

- II. The utility will provide the following facility/unit level data and total annual fleet data, in an Excel spreadsheet(s) expressed in total tons, to EGLE for the following pollutants:
 - a) Sulfur dioxide (SO₂)
 - b) Nitrogen oxides (NO_x)
 - c) Carbon monoxide (CO)
 - d) Particulate matter (PM)
 - e) Lead (Pb)
 - f) Mercury (Hg)
 - g) Volatile organic compounds (VOC)
 - h) Carbon dioxide (CO₂)

These data will be presented as raw numbers/units and as the aggregate change comparing the three portfolios - #1, #2 and #5. The methodology used to determine the emissions from the respective RTO purchases will be explained. The utility will propose a sample template of what would be provided in the IRP filing to EGLE for agreement 30 days before the filing.

- III. Analyze all portfolios to identify and quantitatively assess the potential impacts to overburdened communities. The utility will perform an Environmental Justice Screening

using the EPA Environmental Justice Screening and Mapping Tool (EJSCREEN) or the Michigan Environmental Justice Screening Tool (MiEJScreen). The analysis will include overburdened communities within a 3-mile radius of each facility for all facilities including peaking units. Overburdened communities will be identified using the EJ composite score recommended by the tool used. This may vary based upon differences between tools. Utilities are encouraged to use the MiEJScreen Tool to the extent practical. This assessment should address air emissions and early retirement of fossil fuel-fired facilities.

- IV. Using the overburdened communities identified in the analysis completed in III, qualitatively assess the potential impacts of all portfolios including utility proposed early retirements of fossil fuel-fired facilities. The analysis should address water quality, waste disposal, and expected changes in land use for new or retiring resources to the extent known at the time of filing.
- V. To determine health impact estimates for air emissions, the utility will use the environmental Benefits Mapping and Analysis Program–Community Edition (BenMAP-CE), the Co-Benefits Risk Assessment (COBRA) Health Impacts Screening and Mapping Tool, or a similar analytical tool with mapping features and spatial resolution down to at least the county level. Based on the pollutant parameters compatible with the chosen tool, this air emissions data analysis will be performed to provide health impact estimates to assess:
 - a. Overall fleetwide health impacts of utility proposed early retirement of fossil fuel-fired facilities and renewable energy adoption. Results, including impacts and associated costs, will be presented for portfolios #1, #2 and #5.
 - b. Impacts on overburdened communities identified in the analysis will be completed in section III (within a 3-mile radius). Results, including impacts and associated costs, will be presented for all five listed portfolios.
- VI. If a decrease in PM_{2.5} emissions is not demonstrated at each individual electric generating unit within a 6-mile radius of an identified overburdened community, including any new proposed units that could reasonably be expected to locate within the 6-mile radius, conduct dispersion modeling for PM_{2.5} including all electric generating unit(s) within a 6-mile radius of the identified vulnerable community. The current

emissions should be used to establish a baseline modeling demonstration by which to compare the future impacts of portfolio #2. Any dispersion analysis conducted pursuant to this item, does not necessarily need to be a refined analysis. A screening analysis employing reasonable assumptions is acceptable. How refined the analysis is at the discretion of the utility. The goal of this analysis is to assess how the overall ambient concentrations of PM_{2.5} in vulnerable communities may be affected and to encourage an assessment of ambient impacts in the siting of any new units.

- VII. For resources located within the nonattainment areas (or an area that may be designated nonattainment based on reasonably known information at the time of filing) in the electric utility service territory, identify and assess their impact to the nonattainment status for the portfolio #2 listed above as compared to portfolio #1, and qualitatively support in testimony. The assessment should consider all nonattainment pollutants (i.e., SO₂ and ozone), as well as their precursors (i.e., NO_x and VOCs).
- VIII. Narrative discussion of the quantitative and qualitative health and environmental impacts based on the analysis above, methodologies, data sources, and related observations. Explain how these considerations were taken into account in the utility's decision.

Appendix 2 Acronym List

BenMAP-CE: Benefits Mapping and Analysis Program- Community Edition

CO: Carbon Monoxide

COBRA: Co-Benefits Risk Assessment

CON: Certificate of Necessity

CO₂: Carbon Dioxide

DER: Distributed Energy Resources

DR: Demand Response

EGLE: Department of Environment, Great Lakes, and Energy

EJ: Environmental Justice

EJ SCREEN: Environmental Justice Screening and Mapping Tool

EWR: Energy Waste Reduction

Hg: Mercury

IRP: Integrated Resource Plan

ISO: Independent System Operator

kW: Kilowatt

kWh: Kilowatt-hour

LRZ: Local Resource Zone

MiEJScreen: Michigan Environmental Justice Screening Tool

MIRPP: Michigan Integrated Resource Planning Parameters

MPSC: Michigan Public Service Commission or Commission

MW: Megawatts

MWh: Megawatt Hour

NO_x: Nitrogen Oxide

NPVRR: Net Present Value Revenue Requirement

NWA: Non-Wire Alternative

O&M: Operation and Maintenance

Pb: Lead

PCA: Proposed Course of Action

PM: Particulate Matter

PPA: Power Purchase Agreement

REC: Renewable Energy Credit

RFP: Request for Proposal

RTO: Regional Transmission Organization

SO₂: Sulfur Dioxide

Staff: Commission Staff

USEPA: United States Environmental Protection Agency

VOC: Volatile Organic Compounds

ZRC: Zonal Resource Credit

PROOF OF SERVICE

STATE OF MICHIGAN)

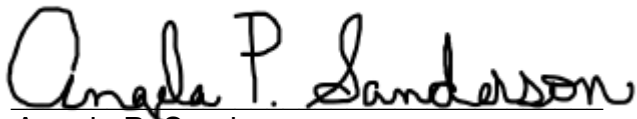
Case No. U-18461

County of Ingham)

Brianna Brown being duly sworn, deposes and says that on October 27, 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 Brown

Subscribed and sworn to before me
this 27th day of October 2022.



Angela P. Sanderson
Notary Public, Shiawassee County, Michigan
As acting in Eaton County
My Commission Expires: May 21, 2024

GEMOTION DISTRIBUTION SERVICE LIST

kadarkwa@itctransco.com	ITC
sejackinchuk@varnumlaw.com	Energy Michigan
cwilson@cloverland.com	Cloverland
mheise@cloverland.com	Cloverland
vobmgr@UP.NET	Village of Baraga
braukerL@MICHIGAN.GOV	Linda Brauker
info@VILLAGEOFCLINTON.ORG	Village of Clinton
coneill@homeworks.org	Tri-County Electric Co-Op
psimmer@HOMEWORKS.ORG	Tri-County Electric Co-Op
frucheyb@DTEENERGY.COM	Citizens Gas Fuel Company
mpsc.filings@CMSENERGY.COM	Consumers Energy Company
kay8643990@YAHOO.COM	Superior Energy Company
vickie.nugent@wecenergygroup.com	Upper Michigan Energy Resources Corporation
jlarsen@uppc.com	Upper Peninsula Power Company
estocking@uppc.com	Upper Peninsula Power Company
dave.allen@TEAMMIDWEST.COM	Midwest Energy Coop
bob.hance@teammidwest.com	Midwest Energy Coop
tharrell@ALGERDELTA.COM	Alger Delta Cooperative
tanderson@cherrylandelectric.coop	Cherryland Electric Cooperative
slamp@glenergy.com	Great Lakes Energy Cooperative
sculver@glenergy.com	Great Lakes Energy Cooperative
kmarklein@STEPHENSON-MI.COM	Stephenson Utilities Department
debbie@ONTOREA.COM	Ontonagon County Rural Elec
MVanschoten@pieg.com	Presque Isle Electric & Gas Cooperative, INC
dbraun@TECMI.COOP	Thumb Electric
rbishop@BISHOPENERGY.COM	Bishop Energy
mkuchera@AEPENERGY.COM	AEP Energy
todd.mortimer@CMSENERGY.COM	CMS Energy
igoodman@commerceenergy.com	Just Energy Solutions
david.fein@CONSTELLATION.COM	Constellation Energy
kate.stanley@CONSTELLATION.COM	Constellation Energy
kate.fleche@CONSTELLATION.COM	Constellation New Energy
mpscfilings@DTEENERGY.COM	DTE Energy
bgorman@FIRSTENERGYCORP.COM	First Energy
rarchiba@FOSTEROIL.COM	My Choice Energy
greg.bass@calpinesolutions.com	Calpine Energy Solutions
rabaey@SES4ENERGY.COM	Santana Energy
cborr@WPSCI.COM	Spartan Renewable Energy, Inc. (Wolverine Power Marketing Corp)
gpirkola@escanaba.org	City of Escanaba
crystalfallsmgr@HOTMAIL.COM	City of Crystal Falls
felichel@MICHIGAN.GOV	Lisa Felice
mmann@USGANDE.COM	Michigan Gas & Electric
mpolega@GLADSTONEMI.COM	City of Gladstone
dan@megautilities.org	Integrays Group
lrgustafson@CMSENERGY.COM	Lisa Gustafson

GEMOTION DISTRIBUTION SERVICE LIST

daustin@IGSENERGY.COM	Interstate Gas Supply Inc
krichel@DLIB.INFO	Thomas Krichel
cityelectric@BAYCITYMI.ORG	Bay City Electric Light & Power
jreynolds@MBLP.ORG	Marquette Board of Light & Power
bschlansker@PREMIERENERGYLLC.COM	Premier Energy Marketing LLC
ttarkiewicz@CITYOFMARSHALL.COM	City of Marshall
d.motley@COMCAST.NET	Doug Motley
mpauley@GRANGERNET.COM	Marc Pauley
ElectricDept@PORTLAND-MICHIGAN.ORG	City of Portland
kd@alpenapower.com	Alpena Power
dbodine@LIBERTYPOWERCORP.COM	Liberty Power
leew@WVPA.COM	Wabash Valley Power
tking@WPSCI.COM	Wolverine Power
ham557@GMAIL.COM	Lowell S.
BusinessOffice@REALGY.COM	Realgy Energy Services
jeinstein@volunteerenergy.com	Volunteer Energy Services
jhammel@hillsdalebpu.com	Hillsdale Board of Public Utilities
mrzwiers@INTEGRYSGROUP.COM	Michigan Gas Utilities/Upper Penn Power/Wisconsin
Teresa.ringenbach@directenergy.com	Direct Energy
christina.crable@directenergy.com	Direct Energy
angela.schorr@directenergy.com	Direct Energy
ryan.harwell@directenergy.com	Direct Energy
johnbistranin@realgy.com	Realgy Corp.
kabraham@mpower.org	Katie Abraham, MMEA
mgobrien@aep.com	Indiana Michigan Power Company
mvorabouth@ses4energy.com	Santana Energy
suzy@megautilities.org	MEGA
dan@megautilities.org	MEGA
general@itctransco.com	ITC Holdings
lpage@dickinsonwright.com	Dickinson Wright
Deborah.e.erwin@xcelenergy.com	Xcel Energy
mmpeck@fischerfranklin.com	Matthew Peck
CANDACE.GONZALES@cmsenergy.com	Consumers Energy
JHDillavou@midamericanenergyservices.com	MidAmerican Energy Services, LLC
JCAltmayer@midamericanenergyservices.com	MidAmerican Energy Services, LLC
LMLann@midamericanenergyservices.com	MidAmerican Energy Services, LLC
karl.j.hoesly@xcelenergy.com	Northern States Power
kerri.wade@teammidwest.com	Midwest Energy Coop
Marie-Rose.Gatete@teammidwest.com	Midwest Energy Coop
meghan.tarver@teammidwest.com	Midwest Energy Coop
sarah.jorgensen@cmsenergy.com	Consumers Energy
Michael.torrey@cmsenergy.com	Consumers Energy
adella.crozier@dteenergy.com	DTE Energy
karen.vucinaj@dteenergy.com	DTE Energy

GEMOTION DISTRIBUTION SERVICE LIST

Michelle.Schlosser@xcelenergy.com

dburks@glenergy.com

kabraham@mpower.org

shannon.burzycki@wecenergygroup.com

kerdmann@atcllc.com

acotter@atcllc.com

phil@allendaleheating.com

tlundgren@potomaclaw.com

Ichappelle@potomaclaw.com

Amanda@misostates.org

customerservice@eligoenergy.com

info@dillonpower.com

Cherie.fuller@edfenergyservices.com

customercare@plymouthenergy.com

rfawaz@energyintl.com

customerservice@nordicenergy-us.com

regulatory@texasretailenergy.com

Xcel Energy

Great Lakes Energy

Michigan Public Power Agency

Michigan Gas Utilities Corporation

American Transmission Company

American Transmission Company

Phil Forner

Timothy Lundgren

Laura Chappelle

Amanda Wood

Eligo Energy MI, LLC

Dillon Power, LLC

EDF Energy Services, LLC

ENGIE Gas & Power f/k/a Plymouth Energy

Energy International Power Marketing dba PowerOne

Nordic Energy Services, LLC

Texas Retail Energy, LLC