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STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of
DTE Electric Company to increase its
rates, amend its rate schedules and
rules governing the distribution and
supply of electric energy, and for
miscellaneous accounting authority.

Case No. U-21534

Volume No. 6

PUBLIC RECORD

CROSS-EXAMINATION - PART 3 - REVISED

1 MR. TEMPLETON: Great. Thank you, your
2 Honor. On behalf of the Detroit Area Advocacy
3 Organizations, I move to bind in the Direct Written
4 Testimony of Witness Justin Schott, that consisted of a
5 cover page and 78 pages of questions and answers. I also
6 move to admit Exhibits DAO-101 through 163, inclusive,
7 which Mr. Schott sponsored as part of his direct written
8 testimony.

9 JUDGE WALLACE: No rebuttal?

10 MR. TEMPLETON: No rebuttal, your Honor,
11 and no rebuttal for any of the other DAAO witnesses.

12 JUDGE WALLACE: O.K. Is there any
13 objection to binding in the direct testimony of
14 Mr. Schott?

15 Hearing none, the testimony is bound in.

16 Is there any objection to the admission
17 of Exhibits DAO-101 through DAO-163?

18 Hearing none, those exhibits are
19 admitted.

20 (Testimony bound in.)

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STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of DTE	)	
ELECTRIC COMPANY for authority to	)	Case No. U-21534
increase its rates, amend its rate schedules	)	
and rules governing the distribution and	)	ALJ Sally Wallace
supply of electric energy, and for	)	
miscellaneous accounting authority	)	

DIRECT TESTIMONY OF JUSTIN SCHOTT

ON BEHALF OF

SOULARDARITY AND WE WANT GREEN, TOO
(DETROIT AREA ADVOCACY ORGANIZATIONS)

July 26, 2024

1 **I. INTRODUCTION AND SUMMARY**

2 **Q: Please state your name, occupation, and business address.**

3 **A:** My name is Justin Schott. I serve as Director of the Energy Equity Project (EEP) and
4 Lecturer of Energy Justice, both through the University of Michigan's School for
5 Environment and Sustainability. As a lecturer, I teach a graduate-level class to forty
6 students each fall semester. My business address is 440 Church St., Ann Arbor, MI 48109.

7
8 **Q: On whose behalf are you submitting testimony?**

9 **A:** I am submitting testimony on behalf of Soulardarity and We Want Green, Too
10 (collectively, the Detroit Area Advocacy Organizations or DAAO).

11
12 **Q: Please summarize your educational background.**

13 **A:** I have an M.S. in Resource Policy and Behavior from the University of Michigan (2006)
14 and a B.S. in Natural Resources from Cornell University (2002).

15
16 **Q: Please summarize your professional experience.**

17 **A:** I have served in my current role as Director of the Energy Equity Project since February
18 2021. My primary accomplishment has been convening a team of researchers, community
19 advocates, regulators, and utilities to develop and implement a standardized framework for
20 measuring and advancing equity in the energy system. The framework evaluates 148
21 potential metrics; considers demographic, historical, procedural, and distributional aspects
22 of equity; and blends quantitative metrics with qualitative approaches. In leading the
23 development of the framework, I organized ten stakeholder-specific listening sessions from

1 May 2021 to February 2022 that engaged more than 400 energy equity leaders across the
2 country. I recruited forty-five co-authors and advisors to serve on and support four
3 workgroups for fifteen months of intensive work reviewing listening session input and 148
4 proposed metrics and best practices, developing guiding principles, and writing chapters
5 representing each of the four pillars of energy justice. In all, I coordinated a highly
6 collaborative and participatory effort that was the result of more than 3,000 hours of
7 commitment from participants and workgroup members.

8 I have presented this work in over forty settings, including roundtables, panels,
9 advisory boards, public utility commission (PUC) proceedings, university classes, and
10 energy and climate conferences since May 2021. I have also been quoted by more than a
11 dozen public media sources, published opinion pieces, and submitted work to multiple
12 academic journals (as detailed in my CV).¹ Over the course of this work, I have become
13 intimately familiar with the scope of equity measurement and best practices to advance
14 equity in both regulatory and utility spaces. In recognition of the success of the Energy
15 Equity Project and my professional expertise, I received an appointment as a lecturer at the
16 School for Environment and Sustainability in 2022. I teach an interdisciplinary graduate-
17 level course on energy justice to forty to forty-five students each fall semester.

18 Previously I served as Executive Director of EcoWorks, a Detroit nonprofit, from
19 June 2015 to November 2020. I was responsible for overseeing all aspects of financial
20 management, development, communications, public relations, staff recruitment,
21 administrative operations, and risk management. I managed a team of thirty staff members
22 with an annual budget of \$2.8 million. I also led research efforts to explore connections

¹ Ex. DAO-101, Justin Schott CV & Summary of Qualifications.

1 between weatherization, health, and affordability, in partnership with Dr. Tony Reames,
2 the University of Michigan's Urban Energy Justice Lab, and other University of Michigan
3 faculty and institutes. From 2019 to 2020, I was an intervenor in DTE Energy's Energy
4 Waste Reduction biannual plans and successfully made the case to increase the budget for
5 single-family and multi-family low-income programs by \$10 million. My testimony drew
6 on the research conducted in partnership with Dr. Reames.

7
8 **Q: Have you testified before the Michigan Public Service Commission previously?**

9 **A:** Yes, I provided testimony to the Michigan Public Service Commission (MPSC, or the
10 Commission) regarding DTE Gas's and DTE Electric's 2019 Energy Waste Reduction
11 Reconciliation in MPSC Case Nos. U-20429 (Gas) and U-20373 (Electric). I also provided
12 testimony in DTE Gas's current rate case, MPSC Case No. U-21291.

13
14 **Q: Have you testified or provided comments in regulatory proceedings in other states?**

15 **A:** Yes, I provided testimony to the Kansas Corporation Commission regarding Evergy's
16 filing in the Kansas Energy Efficiency Investment Act docket (2022), and to the Illinois
17 Commerce Commission for gas rate cases brought by Ameren and People's Gas (2023). I
18 also served as a witness in an Integrated Resource Plan proposed by Dominion Energy in
19 Virginia (ongoing).

20
21 **Q: Are you sponsoring any exhibits or workpapers in your testimony?**

22 **A:** Yes, I am sponsoring the following exhibits and workpapers:
23 DAO-101. Justin Schott CV & Summary of Qualifications

- 1 DAO-102. SHALANDA BAKER, SUBIN DEVAR & SHIVA PRAKASH, INITIATIVE FOR ENERGY
2 JUST., THE ENERGY JUSTICE WORKBOOK (2019)
- 3 DAO-103. Diana Hernández, *Understanding “Energy Insecurity” and Why It Matters to*
4 *Health*, SOC. SCI. & MED., no. 167, 2016
- 5 DAO-104. *In 2020, 27% of U.S. Households Had Difficulty Meeting Their Energy Needs*,
6 U.S. ENERGY INFO. ADMIN. (Apr. 11, 2022)
- 7 DAO-105. *Workgroups*, MICH. PUB. SERV. COMM’N
- 8 DAO-106. MICH. PUB. SERV. COMM’N, REQUEST FOR QUOTES: EQUITY AND
9 ENVIRONMENTAL JUSTICE TECHNICAL ASSISTANCE (2024)
- 10 DAO-107. ENERGY EQUITY PROJECT, SCH. FOR ENV’T & SUSTAINABILITY, UNIV. OF MICH.,
11 ENERGY EQUITY PROJECT REPORT (2022)
- 12 DAO-108. *Low-Income Self-Sufficiency Plan*, DTE (last accessed Apr. 30, 2024)
- 13 DAO-109. *Billing: Frequently Asked Questions*, DTE (last accessed May 4, 2024)
- 14 DAO-110. JS Workpaper 1, Michigan Energy Burdens
- 15 DAO-111. We the People Michigan with Soulardarity & MEJC, *Utility Redlining:*
16 *Inequitable Electric Distribution in the DTE Service Area*, (2022)
- 17 DAO-112. Sheri McWhirter, *DTE, Consumers Win \$231M in Approvals Despite*
18 *Reliability Woes*, MLIVE (Mar. 4, 2024), <https://perma.cc/4G2E-K7ED>
- 19 DAO-113. Sarah Alvarez & Emily Hopkins, *She Didn’t Know She Still Owed Money to*
20 *Her Utility. Then 25% of Her Paycheck Was Gone*, PROPUBLICA (Aug. 19,
21 2022)
- 22 DAO-114. Dominic J. Bednar & Tony G. Reames, *Recognition of and Response to Energy*
23 *Poverty in the United States*, NATURE ENERGY, no. 5, June 2020

- 1 DAO-115. Janjala Chirakija, Seema Jayachandran & Pinchuan Ong, *Inexpensive Heating*
2 *Reduces Winter Mortality* (Nat'l Bureau of Econ. Rsch., Working Paper
3 No. 25681, 2019)
- 4 DAO-116. Michelle Graff, David M. Konisky, Sanya Carley & Trevor Memmott, *Climate*
5 *Change and Energy Insecurity: A Growing Need for Policy Intervention*, 15
6 ENV'T JUST, no. 2, 2022
- 7 DAO-117. Sonal Jessel, Samantha Sawyer & Diana Hernández, *Energy, Poverty, and*
8 *Health in Climate Change: A Comprehensive Review of an Emerging*
9 *Literature*, 7 FRONTIERS IN PUB. HEALTH, Dec. 2019
- 10 DAO-118. Adam Zuvanich, *Hurricane Beryl caused at least 20 Houston-area deaths, with*
11 *half power outage-related*, Houston Public Media (Jul. 18, 2024)
- 12 DAO-119. Brian Stone, Jr. et al., *How Blackouts during Heat Waves Amplify Mortality and*
13 *Morbidity Risk*, 57 ENVIRON. SCI. TECHNOL. 8245 (2023)
- 14 DAO-120. Jeremiah Bohr & Anna C. McCreery, *Do Energy Burdens contribute to*
15 *Economic Poverty in the United States? A Panel Analysis*, 99 SOC. FORCES,
16 no. 1, Sept. 2020
- 17 DAO-121. Gopal K. Singh & Hyunjung Lee, *Marked Disparities in Life Expectancy by*
18 *Education, Poverty Level, Occupation, and Housing Tenure in the United*
19 *States*, INT'L J. OF MATERNAL & CHILD HEALTH & AIDS, no. 10, 2021
- 20 DAO-122. JS Working Paper 2
- 21 DAO-123. ARIEL DREHOBL & LAUREN ROSS, AM. COUNCIL FOR AN ENERGY-EFFICIENT
22 ECON., LIFTING THE HIGH ENERGY BURDEN IN AMERICA'S LARGEST CITIES:

1 HOW ENERGY EFFICIENCY CAN IMPROVE LOW INCOME AND UNDERSERVED
2 COMMUNITIES (2016)

3 DAO-124. MARILYN A. BROWN, ANMOL SONI, MELISSA V. LAPSAS & KATIE SOUTHWORTH,
4 OAK RIDGE NAT'L LAB'Y, LOW-INCOME ENERGY AFFORDABILITY:
5 CONCLUSIONS FROM A LITERATURE REVIEW (2020)

6 DAO-125. SANYA CARLEY, DAVID KONISKY & TREVOR MEMMOTT, ENERGY JUST. LAB,
7 IND. UNIV., HOUSEHOLD ENERGY INSECURITY SURVEY, WINTER 2021–2022
8 (2022)

9 DAO-126. Trevor Memmott, Sanya Carley, Michelle Graff & David M. Konisky,
10 *Sociodemographic Disparities in Energy Insecurity Among Low-Income*
11 *Households Before and During the COVID-19 Pandemic*, 6 *Nature Energy*, no.
12 2

13 DAO-127. Ill. Com. Comm'n Docket Nos. 23-0068 & 23-0069, Colton Direct Testimony
14 (May 9, 2023)

15 DAO-128. Rahul Agrawal Bejarano CV & Summary of Qualifications.

16 DAO-129. *Quick Facts: Michigan*, U.S. CENSUS BUREAU (last accessed May 5, 2024),
17 <https://perma.cc/DFN9-WKP5>

18 DAO-130. JS Workpaper 3

19 DAO-131. JS Workpaper 4

20 DAO-132. Shuchen Cong, Destenie Nock, Yueming Lucy Qiu & Bo Xing, *Unveiling*
21 *Hidden Energy Poverty Using the Energy Equality Gap*, 13 *NATURE*
22 *COMMUNIS*, 2022

23 DAO-133. *Introduction*, HOME ENERGY AFFORDABILITY GAP (last accessed May 5, 2024)

1 DAO-134. REVISED QUARTERLY REPORT FOR 1ST, 2ND, AND 3RD QUARTERS OF 2023, DTE
2 (2023)

3 DAO-135. DTE's Response to FLO's First Discovery Request, FLODG-1.3

4 DAO-136. Sarah Alvarez, *Lights Out: Profitable Utility Company Shut Off Electricity to*
5 *Homes Hundreds of Thousands of Times*, PROPUBLICA (Mar. 18, 2022)

6 DAO-137. Impact of Behavior Programs (Allcott 2009)

7 DAO-138. Impact of Weatherization Programs (Tonn et al, 2018)

8 DAO-139. JS Workpaper 5 - Customer Late Fees

9 DAO-140. Attachment to DTE's Response to DAAO's First Discovery Request,
10 DAAODE 1.1-1.5

11 DAO-141. *FACT SHEET: Biden Administration Deploys American Rescue Plan Funds to*
12 *Protect Americans from Rising Home Heating Costs; Calls on Utility*
13 *Companies to Prevent Shut Offs This Winter*, WHITE HOUSE (Nov. 18, 2021)

14 DAO-142. JS Workpaper 6 - disconnections (Shutoffs)

15 DAO-143. JS Workpaper 7 - Affordable Protection Plan enrollments

16 DAO-144. U-21291 DTE's Response to FLO's First Discovery Request, FLODG-1.9

17 DAO-145. DTE's Response to DAAO's First Discovery Request, DAAODE-1.36

18 DAO-146. DTE's Response to DAAO's First Discovery Request, DAAODE-1.28

19 DAO-147. Kaiser Family Foundation, Population Up to 200% FPL (American Community
20 Survey) (last viewed July 9, 2024)

21 DAO-148. Excerpt from Ill. Com. Comm'n No. 23-0067, Order (Nov. 16, 2023)

22 DAO-149. NAT'L ENERGY ASSISTANCE DIRECTORS' ASS'N, SUMMARY OF STATE UTILITY
23 SHUT-OFF MORATORIUMS (2021)

DAO-150. *Low-Income Energy Policy Board*, MICH. PUB. SERV. COMM'N (last accessed May 6, 2024)

DAO-151. AFFORDABILITY, ALIGNMENT, AND ACCESSIBILITY SUBCOMMITTEE GOALS
(2022)

DAO-152. AFFORDABILITY, ALIGNMENT, AND ASSISTANCE SUBCOMMITTEE, MICH. PUB.
SERV. COMM'N, PRESENTATION (Oct. 3, 2023)

DAO-153. AFFORDABILITY, ALIGNMENT, AND ACCESSIBILITY SUBCOMMITTEE KICK-OFF
(2021)

DAO-154. AFFORDABILITY, ALIGNMENT, AND ACCESSIBILITY SUBCOMMITTEE 11-10-2022

MEETING (2022)

DAO-155. AFFORDABILITY, ALIGNMENT, AND ACCESSIBILITY SUBCOMMITTEE 9-9-2021
MEETING (2021)

DAO-156. *Credits, Collections, and Arrearages Reports Monthly Dashboard*, ILL. COM.
COMM'N (last accessed May 6, 2024)

DAO-157. ACEVES GUZMAN, DECISION ADOPTING INTERIM RULES TO REDUCE
RESIDENTIAL CUSTOMER DISCONNECTIONS FOR CALIFORNIA-JURISDICTIONAL
ENERGY UTILITIES (2018)

DAO-158. Phase I Decision Adopting Rules and Policy Changes to Reduce Residential Customer Disconnections for the Larger California-jurisdictional Energy Utilities, Decision 20-06-003 (June 11, 2020)

DAO-159. MATTHEW DESMOND, POVERTY, BY AMERICA

DAO-160. *Winter and Covid-19 Shut-Off Moratoriums*, NATL ASS'N OF ENERGY ASSISTANCE DIRECTORS (Mar. 15, 2021)

1 DAO-161. L.A. DEP'T OF WATER & POWER, MOTION TO DISCONTINUE SHUT-OFFS AS AN
2 ACCOUNT MANAGEMENT COLLECTION TOOL FOR CUSTOMERS ENROLLED IN
3 LADWP EZ-SAVE AND LIFELINE DISCOUNT PROGRAMS (2022)

4 DAO-162. SANYA CARLEY AND DAVID KONISKY, UTILITY DISCONNECTIONS DASHBOARD
5 (2023)

6 DAO-163. *Low-Income Programs*, DTE (last accessed May 4, 2024)
7

8 **Q: What is the purpose of your testimony?**

9 **A:** My testimony has several purposes. I discuss the purpose of each section of my testimony
10 below:

11 Part I: Provide my professional background and qualifications.

12 Part II: Introduce an energy equity framework that the Commission can use to
13 evaluate the merits of DTE Electric's proposed rate increase. Using a robust
14 energy equity framework to make decisions in rate cases and other PUC
15 dockets has become a national best practice. I present the four pillars of
16 energy equity—recognition, procedural, distributive, restorative—and
17 recommend actions the MPSC can take to address concerns in each pillar.

18 Part III: Analyze the extent of energy insecurity among DTE Electric's low-income
19 customers and the harms they experience as a result of DTE Electric's
20 excessive shutoff rates, aggressive collections practices, and insufficient
21 efforts to promote energy affordability. I quantify disparities in energy
22 burdens by race and income among DTE Electric's customers and present

1 negative trends in customers' energy security and enrollments in affordable
2 payment plans.

3 Part IV: Assess DTE Electric's approach and performance regarding energy insecurity
4 experienced by its customers. I find that, despite multiple directives from the
5 MPSC and the availability of cost-neutral opportunities to provide financial
6 relief, DTE Electric has adopted a punitive approach to its customers who
7 struggle to afford their energy bills.

8 Part V: Assess the MPSC's response to energy insecurity and unaffordability through
9 previous dockets (especially MPSC Case No. U-20757, the "COVID-19
10 docket"), workgroup reports and minutes, and other public statements.

11 Part VI: Recommend structural affordability and energy security solutions that the
12 MPSC can require from DTE Electric. The energy assistance programs DTE
13 Electric offers serve a small fraction of eligible customers and have not
14 reduced the incidence of shutoffs or customer debt. To the contrary, DTE
15 Electric's efforts have demonstrated that without intervention, its low-income
16 customers will continue to face serious financial and health consequences
17 from the endemic of rising and unaffordable electric bills. My testimony
18 includes seven recommendations that the MPSC should adopt to protect low-
19 moderate income (LMI) customers and ensure lasting affordability.

20

1 **II. AN EQUITY FRAMEWORK FOR PUBLIC SERVICE COMMISSION**
 2 **EVALUATION AND DECISION-MAKING**

3 **Q: Please define energy equity and related concepts.**

4 **A:** In the last decade, the field of energy equity, also referred to as energy justice, has emerged
 5 as a particular subset of environmental justice. While environmental justice has
 6 traditionally focused on disproportionate exposure to pollution, “an energy just world
 7 involves [the] equitable sharing of benefits and burdens involved in the production and
 8 consumption of energy services. It is also one that is fair in how it treats people and
 9 communities in energy decision-making.”²

10 The Initiative for Energy Justice, which was co-founded by Shalanda Baker,
 11 currently Director of the U.S. Department of Energy’s (DOE) Office of Community Impact
 12 and Diversity, states four goals of energy justice:³

- 13 1. Advance **energy democracy**, defined as “the notion that communities should have a
 14 say and agency in shaping and participating in their energy future;”⁴
- 15 2. Alleviate **energy insecurity**, which entails the inability to meet basic household energy
 16 needs or compromising on other basic needs in order to access energy;⁵
- 17 3. Reduce **energy burden**, or the percentage of household income spent on energy;⁶ and
- 18 4. Alleviate **energy poverty**, “a lack of access to basic life-sustaining energy.”⁷

² Ex. DAO-102, SHALANDA BAKER ET AL., INITIATIVE FOR ENERGY JUST., THE ENERGY JUSTICE WORKBOOK (2019), at 13 (citations omitted).

³ *Id.* at 10.

⁴ *Id.*

⁵ *Id.* at 14; see Ex. DAO-103, Diana Hernández, *Understanding “Energy Insecurity” and Why It Matters to Health*, SOC. SCI. & MED., no. 167, (2016), at 1-2 (“Energy insecurity is defined here as ‘an inability to adequately meet basic household energy needs.’”).

⁶ Ex. DAO-102 at 10, 13.

⁷ *Id.* at 10, 14.

The U.S. Energy Information Administration (EIA) surveys multiple aspects of energy insecurity, including, foregoing other basic needs, receiving shutoff notices, and keeping the home at an uncomfortable or unsafe temperature.⁸ EIA surveys have shown that energy insecurity is widespread throughout the country, with “34 million U.S. households (27% of all U.S. households) report[ing] difficulty paying energy bills or report[ing] that they had kept their home at an unsafe temperature because of energy cost concerns” in 2020.⁹

Q: Please explain your use of the term “shutoff” instead of “disconnection.”

A: Both “shutoff” and “disconnection” refer to the same action by DTE Electric of physically removing a customer’s access to energy. Choice of language is a powerful way to shift perspectives. A disconnection, the term used by DTE Electric and the Commission in some contexts, may connote an event that does less harm than a shutoff and is an act that is less personal and preventable. A shutoff, by contrast, and to many with lived experience, speaks more directly to the experience of people who are harmed and of the intentional act of depriving customers of a basic human right. The term disconnection serves to sanitize this extremely harmful practice, in much the same way that the passive phrase, “the officer’s weapon was discharged resulting in a fatality,” is different from the phrase, “the officer shot and killed the person.” The use of more technical-sounding, impersonal jargon is one of the ways in which utilities attempt to minimize the apparent harm of their actions; the term shutoff paints a more accurate

⁸ Ex. DAO-104, *In 2020, 27% of U.S. Households Had Difficulty Meeting Their Energy Needs*, U.S. ENERGY INFO. ADMIN. (Apr. 11, 2022), <https://perma.cc/2TUB-ZWSN>.

⁹ *Id.*

1 picture that reflects the experience of impacted households. To its credit, the MPSC
2 predominantly uses the term shutoff; I use this term exclusively in testimony except in
3 direct quotes or referencing program names.
4

5 **Q: Why are you introducing concepts of energy equity into your analysis of DTE**
6 **Electric's rate case?**

7 **A:** The Commission has consistently expressed concern about households that face
8 unaffordable energy bills and myriad forms of energy insecurity. The Commission
9 oversees three different bodies to address these concerns: the Energy Waste Reduction
10 Low-Income (EWR-LI) workgroup, the Energy Affordability and Accessibility
11 Collaborative (EAAC), and the Low-Income Energy Policy Board (LIEPB), which serves
12 as an umbrella for these efforts.¹⁰ The Commission and these three groups have each sought
13 greater coordination among efforts to advance energy affordability and security, but to
14 date, there has not been an overarching strategy to guide these efforts.

15 DTE Electric does not have a coherent approach to addressing energy affordability,
16 and it appears it has no intentions of adopting one. The Company has not evaluated how
17 its proposed rate increase would impact already excessive energy burdens of its low-
18 income customers, has not aligned its Percentage of Income Payment Plan (PIPP) pilot
19 with achieving a 6% energy burden, and fails to identify hundreds of thousands of
20 customers who are income-eligible but not participating in any of DTE's assistance
21 programs.

¹⁰ See Ex. DAO-105, *Workgroups*, MICH. PUB. SERV. COMM'N (last accessed May 5, 2024),
<https://www.michigan.gov/mpsc/commission/workgroups>.

Both the Company and the Commission have basically been responding to accelerating unaffordability and energy insecurity crises without an operating manual. To its credit, the MPSC recently recognized the need for a cohesive energy framework and approach by issuing a Request for Quotes for Equity and Environmental Justice Technical Assistance to “establish a framework that MPSC Staff and the Commission can apply broadly across all divisions of the MPSC and the Commission Office when assessing utility filings within its legal framework.”¹¹

A. Overview of the Framework to Measure and Advance Energy Equity

Q: What is the Framework to Measure and Advance Energy Equity, and how does it apply to this docket and the work of the MPSC?

A: The Framework to Measure and Advance Energy Equity (“the Framework” or “the EEP Framework”), delineated in Exhibit DAO-107, is a compendium of research and an assessment of 148 potential energy equity metrics and best practices.¹² The Framework was equitably developed by forty-five co-authors and advisors and the input of more than 400 stakeholders. The Framework was released in September 2022, has been applied by PUCs in Colorado, Illinois, and Oregon, and is under consideration in Virginia. It is designed to be applied by utilities, regulators, practitioners, and community organizations and has sector-specific guidance for each type of stakeholder.¹³ The Framework identifies concrete action steps—both quantitative and qualitative—to advance each of the four

¹¹ Ex. DAO-106, MICH. PUB. SERV. COMM’N, REQUEST FOR QUOTES: *EQUITY AND ENVIRONMENTAL JUSTICE TECHNICAL ASSISTANCE* (2024), at 1.

¹² Ex. DAO-107, ENERGY EQUITY PROJECT, SCH. FOR ENV’T & SUSTAINABILITY, UNIV. OF MICH., ENERGY EQUITY PROJECT REPORT (2022), at 9.

¹³ *Id.* at 10.

1 dimensions of energy equity. The Framework adopts the “Four Pillars of Energy Justice”:
 2 Recognition, Procedural, Distributive, and Restorative.¹⁴

3
 4 **B. Recognition Justice Concerns**

5 **Q: Please define recognition justice.**

6 **A:** EEP adopted the definition of Lee and Byrne: “Recognition justice emphasizes the need to
 7 understand different types of vulnerability and specific needs associated with energy
 8 services among social groups (especially marginalized communities).”¹⁵ Recognition
 9 justice requires identifying populations that have gone unnoticed and may face cumulative
 10 impacts from multiple burdens and historically compounding impacts over time.

11
 12 **Q: What concerns do you have in the proposed case from a recognition perspective?**

13 **A:** Recognition justice requires a deep understanding of different communities—their
 14 histories, identities, housing, and energy consumption patterns.

15 First, I am concerned about the mostly uniform treatment of all low-income electric
 16 customers as if they were one class. A low-income customer is generally defined as any
 17 customer with a household income below 200% (or in some cases, below 150%) of the
 18 Federal Poverty Level (FPL).¹⁶ Binary income thresholds determine eligibility for a variety
 19 of DTE Electric’s energy assistance programs. Household income also comprises half of

¹⁴ *Id.* at 177.

¹⁵ *Id.* at 32 (citing Joohee Lee & John Byrne, *Expanding the Conceptual and Analytical Basis of Energy Justice: Beyond the Three-Tenet Framework*, 7 FRONT. ENERGY RES. 99 (2019)).

¹⁶ *Id.* at 93, 109.

1 the energy burden equation, as energy burden is calculated as the annual cost of energy
2 divided by annual gross income.¹⁷

3 Second, even among low-income customers, there is marked variation in energy
4 insecurity and energy burdens. If two households each have a total energy bill of \$3,000
5 annually but incomes of \$15,000 per year and \$30,000 per year, respectively, the household
6 earning \$15,000 per year has an energy burden twice as high (20% vs. 10%) as the \$30,000
7 household. There is almost no formal consideration by DTE Electric or the MPSC of these
8 differences, however. DTE Electric's Low-Income Self-Sufficiency Plan (LSP) is one
9 exception that further segments customers with incomes below 150% of FPL, although the
10 Company does not publish the fixed monthly rates that correspond to different income
11 bands on its LSP website nor in its direct testimony.¹⁸

12 13 **C. Procedural Equity Concerns**

14 **Q: Please define procedural equity.**

15 **A:** According to the EEP Framework, "[p]rocedural measures focus on pathways to
16 implement equitable processes, and program access focuses on expanding accessibility for
17 communities to engage meaningfully."¹⁹ Procedural equity is about the ability of impacted
18 communities to access and influence decision-making to secure positive outcomes for
19 themselves.

¹⁷ *Id.* at 109.

¹⁸ See generally Sparks Direct Testimony at 8–9; Ex. DAO-108, *Low-Income Self-Sufficiency Plan*, DTE (last accessed Apr. 30, 2024), at 1–2.

¹⁹ Ex. DAO-107 at 66.

1 **Q: What concerns do you have in this case from a procedural perspective?**

2 **A:** First, procedural equity is concerned with program access. Access to DTE Electric's
3 assistance programs is limited by multiple factors:

4 1. The number of available slots DTE Electric's assistance programs is severely limited.²⁰

5 DTE does not actively invite or enroll LMI customers to participate in programs such
6 as LSP, LIA, shutoff protection, or Energy Waste Reduction (EWR) programs for low-
7 income households.²¹ It would not be difficult for the Company to automatically enroll
8 eligible customers into the LIA credit or LSP, who say, already receive assistance
9 through the Low-Income Home Energy Assistance Program (LIHEAP) or Michigan
10 Energy Assistance Program (MEAP). As far as I can tell, DTE Electric does not make
11 any attempt to do this.

12 Information about these programs is very difficult to access and seems
13 intentionally opaque. For instance, DTE Electric does not the define the specific bill
14 reductions of LSP on its website.²² This uncertainty is likely to reduce customer interest
15 in a program that DTE Electric appears to tout as its flagship for achieving self-
16 sufficiency.

²⁰ The 2023 combined enrollment of low-income residential customers in the Company's assistance programs was 131,397 customers. DAAO Witness Kinkhabwala shows that about 340,000 DTE Electric Customers are below 150% of Federal Poverty Level (FPL). *See* Kinkhabwala Direct at 10. Additional program enrollment details used in the above calculations: Low-Income Self-Sufficiency Program (LSP; 23,750 enrollees (Sparks Direct at 11)), Residential Income Assistance (RIA) Credit (75,522 enrollees (Sparks Direct at 16)), and Low-Income Assistance (LIA) Credit (32,125 enrollees, Sparks Direct at 17).

²¹ *See* Non -Confidential Direct Testimony of Sergio Cira-Reyes, MPSC Case No. U-21291 at 4 TR 1181-84.

²² *See* Ex. DAO-109, *Billing: Frequently Asked Questions*, DTE (last accessed May 4, 2024), <https://www.dteenergy.com/us/en/residential/billing-and-payments/energy-assistance/low-income-self-sufficiency-plan.html>

While LSP does have multiple tiers of benefits based on income, it would not be difficult for the Company to present this information transparently. During my time at EcoWorks when LSP was started, this information was publicly available to customers who we referred to LSP.

- 1 2. For many years, multiple DTE Energy representatives have participated in bodies such
 2 as the EAAC, EWR-LI workgroup, LIEPB, Coalition to Keep Michigan Warm, and
 3 National Energy and Utility Affordability Coalition (NEUAC). Despite the clear
 4 awareness DTE Electric has had for many years, it has not made learning about or
 5 applying for its assistance programs easy. In fact, in its testimony, DTE Electric does
 6 not reference any efforts to work directly with impacted community members to
 7 improve the design of existing programs. Instead, DTE Electric appears to conduct
 8 meetings only to the meet the minimum standard required by settlement agreements
 9 and Commission orders.²³
- 10 3. There are procedural concerns with the MPSC’s approach to affordability and energy
 11 insecurity, too. EAAC reports, for instance, note a lack of participation by households
 12 of color with lived experience of energy insecurity.²⁴ The reports note the difficulty in
 13 recruiting organizations and households to participate, but these findings fail to
 14 recognize the reality for many LMI households and households of color: there is no
 15 compensation for people’s time or expenses, and there appears to be little prospect of
 16 swaying the priorities, strategies, or decision-making of these bodies. MPSC Staff
 17 requested that the Commission order the groups to pursue relationships in frontline

²³ See *In re Response to COVID-19*, MPSC Case No. U-20757, DTE Comments on Interim Staff Report (June 12, 2023) [hereinafter DTE Comments on Interim Staff Report], at 2–3. For example, DTE calls EWR outreach to RIA customers “unworkable” and “unlikely to be effective,” *id.* at 2, and states that it already has advertisement of low-income programs in place, *id.* at 3.

²⁴ See *In re Response to COVID-19*, MPSC Case No. U-20757, Energy, Affordability, and Accessibility Collaborative, Interim Progress Report (Dec. 17, 2021), at 11 [hereafter December 2021 EEAC Interim Report] (“Staff acknowledges that while the EAAC provided enhanced collaboration across the government, advocacy, human services and utility sectors, representation from high burden, historically marginalized communities was missing. In addition, the group lacked racial and ethnic diversity.”)

communities,²⁵ but had earlier reported difficulty actually doing so.²⁶ Regardless of the underlying causes for these problems or respectable efforts on the part of MPSC Staff, households that are most harmed by DTE Electric’s collections and shutoff practices are not represented in decision-making and have little voice in shaping the programs and credits to be more inclusive and effective for achieving affordability.

Not surprisingly, when frontline community organizations and impacted customers have little to no say in proceedings and their interests are not represented, assistance programs continue to be implemented in a way that does not actually address the roots of the problem nor reduce shutoffs or energy burdens.

D. Distributive Equity Concerns

Q: Please define distributive equity.

A: The EEP Framework’s “Distributive Equity” chapter begins: “Broadly speaking, distributional equity refers to how the benefits and harms of the energy system are distributed, and is closely aligned with the notion of ‘justice as fairness’ Low-income communities and Black, Indigenous, and People of Color (BIPOC) communities are much more likely to face exposure to environmental harms (e.g., toxic pollution, presence of polluting facilities . . .) and less likely to have access to environmental ‘goods’ like green space and parks.”²⁷

²⁵ See *In re Response to COVID-19*, MPSC Case No. U-20757, Energy, Affordability, and Accessibility Collaborative, Interim Progress Report (Mar. 17, 2023) [hereafter March 2023 EEAC Interim Report] at 72.

²⁶ See December 2021 EEAC Interim Report at 11.

²⁷ Ex. DAO-107 at 102 (citations omitted).

1 **Q: What concerns do you have in the proposed case from a distributive perspective?**

2 **A:** My first concern is overarching: DTE Electric resists the use of appropriate metrics that
 3 would reveal and could help mitigate distributive inequities. A critical feature of
 4 distributive equity is that is determined by *outcomes*, such as energy burdens and shutoffs,
 5 as opposed to outputs, which include program enrollments and the dollar value of bill
 6 credits. With a concern for disparities in outcomes, the underlying causes and motives that
 7 result in these disparities are only important to the extent they must be rectified. Whether
 8 a disparity in energy burdens based on race or income exists because of callous indifference
 9 or despite genuine concern and efforts to provide resources to struggling customers, the
 10 result for those customers is the same. In other words, from a distributive equity
 11 perspective, it is ultimately the magnitude of the disparity that is concerning more than the
 12 source of it.

13 Using more precise data, such as the prevalence of shutoffs by census tract, to
 14 identify disparities is necessary to remedy these disparities and is not intended to evaluate
 15 the Company's underlying intentions. DTE Electric, however, takes a defensive stance
 16 toward collaborating to illuminate distributive inequities, which is the first step needed to
 17 address them. For instance, in a response to Staff reporting recommendations in MPSC
 18 Case No. U-20757, DTE Gas and DTE Electric responded: "DTE appreciates the inclusion
 19 of its concern that geographical data may make it appear that certain areas are being
 20 targeted. DTE does not consider geographical data when disconnecting service or
 21 collecting arrearages from a customer."²⁸ It is essential to realize that disparities can occur

²⁸ DTE Comments on Interim Staff Report at 4.

1 without an underlying intention to inflict them. At this point, they require investigation and
2 actions to reverse the inequity.

3 My second distributive equity concern is the dramatic variation in how energy
4 burdens are distributed among DTE customers. More than 99% of Michigan households
5 earning above state median income (about 400% of FPL) have inexpensive energy burdens
6 of 3% of their income or less.²⁹ By contrast, 44% of Michigan households below 100% of
7 FPL have energy burdens above 20%,³⁰ which we consider “catastrophic.” Using income
8 alone in this case, we demonstrate a sevenfold disparity in energy burdens. While energy
9 burdens above 15% and even 20% are common among low-income households, the idea
10 that a household could owe more than 1 out of every 5 dollars of gross income to an energy
11 utility is hard to fathom; introducing terms that reflect these dire situations has generally
12 been avoided. As discussed below, disaggregation by race, occupancy status, and age of
13 housing would likely exacerbate these distributive inequities even further. Testimony by
14 DAAO witness Kinkhabwala uses distributive equity data to illuminate these disparities in
15 greater detail.

16 I am also deeply concerned about significant distributive inequities across ratepayer
17 classes that I do not believe can be explained solely by cost of service (COS) principles. I
18 show that DTE has existing and proposed rates that place a heavy revenue burden on
19 residential customers, including low-income customers, while offering significantly lower
20 rates for uses like greenhouse lighting, space and water heating for commercial retail, metal

²⁹ Ex. DAO-110, JS Workpaper 1, Michigan Energy Burdens. Other than the 6% standard for an affordable energy burden, there is no standard nomenclature for describing energy burdens at different thresholds. EEP has adopted the following scale: 0-3%, “Inexpensive”; 3-6% “Affordable”; 6-9% “Moderately Unaffordable”; 9-12% “High”; 12-15%, “Severe”; 15-18% “Extreme”; >18% “Catastrophic.”

³⁰ *Id.*

1 melting, and other highly specific customer types and purposes.³¹ COS principles alone do
 2 not explain these disparities. A degree of the rate designs is arbitrary and subjective; these
 3 decisions result in unaffordable rates for millions of households and a cascade of impacts
 4 including long-term poverty, foregoing other basic needs, and frequent shutoffs.

5 Finally, there are cumulative impacts from the distributive inequities resulting from
 6 the actions of DTE Electric. For instance, the same customers who have lived with
 7 substandard grid infrastructure and thus a disproportionately high frequency and severity
 8 of outages are also more likely to suffer from unaffordable energy burdens and shutoffs.
 9 In other words, these customers face two forms of excessive risk because DTE fails to
 10 ensure affordable and reliable access to electricity for all of its customers, not just a select
 11 few that live where the majority of residents are White.³² Whether from an outage or
 12 involuntary shutoff, the impacts of being without electricity also disproportionately harm
 13 customers with high rates of asthma and other respiratory illnesses and in areas where many
 14 households lack health insurance. These vulnerabilities intersect—*customers who face the*
 15 *greatest consequences from not having electricity are most likely to lose access*. This is the
 16 result of both investment decisions and neglect, willful resistance to transparent reporting,
 17 and assistance programs that fall short of providing meaningful relief. The cumulative
 18 impacts experienced disproportionately by LMI and BIPOC households are by design.

³¹ See Exhibit A-16, Schedule F2 at 1-4.

³² See generally DAO-111, We the People Michigan with Soulardarity & MEJC, *Utility Redlining: Inequitable Electric Distribution in the DTE Service Area*, (2022).

E. Restorative Justice Concerns

Q: Please define restorative justice.

A: Restorative justice emphasizes concern for future generations and the need to ensure that the structures and conditions that initially enabled harm or disparate impacts to occur are mitigated so that further harm is prevented.

Q: What concerns do you have in the proposed case from a restorative perspective?

A: My restorative justice concerns are epitomized in comments by MPSC Chairman Dan Scripps: “When meeting financial metrics counts for 16 times as much as meeting reliability metrics, something is clearly out of whack.”³³ While concerns with DTE Electric’s performance and steady rate increases are widely known, the Company does not face consequences for providing service that is neither reliable nor affordable. As DAAO Witness Jackson Koeppel states, DTE Electric continues to operate from the profit maximizing principle without structures to curb its behavior and restore protections and affordability to its customers.

Currently, the Consumer Billing Rules are the primary source of protection for LMI customers.³⁴ These rules, however, do not change DTE Electric’s responsibility to generate profits for its investors. There are neither rules nor financial penalties if a utility like DTE Electric causes disproportionate harms to communities of color or LMI households through aggressive shutoff and collections practices or dismal electric reliability performance. DTE Electric customers remain subject to repeated surprises like DTE Energy’s decision to sell

³³ Ex. DAO-112, Sheri McWhirter, *DTE, Consumers Win \$231M in Approvals Despite Reliability Woes*, MLIVE (Mar. 4, 2024), <https://perma.cc/4G2E-K7ED>, at 3.

³⁴ See generally MCL §§ 460.101–460.169.

customer debt for pennies on the dollar.³⁵ These actions perpetuate and exacerbate the harms that LMI communities have faced for decades and impede efforts to mitigate those harms in future generations.

F. Summary of Highest Equity Priorities Identified by EEP

Q: From an energy equity perspective, what should be the primary considerations for the MPSC when assessing requests for rate increases?

A: There is broad consensus that energy should be affordable to all residents regardless of income, occupancy status, housing stock, heating fuel, or other demographics (e.g., household size, race, age, disability, or medical condition).³⁶ Over the course of ten EEP listening sessions in 2021, reducing or eliminating shutoffs was the overwhelming priority raised by more than 400 people representing an array of sectors, including utilities, regulators, grassroots organizations, and nonprofit practitioners.³⁷ Other distributive equity priorities included reducing the maximum energy burden faced by any customers, reducing disparities in energy burdens, and reducing high energy burdens among BIPOC households.³⁸

Shutoffs should be reserved for exceptionally rare circumstances such as utility theft, rather than being used as a response to the structural conditions that result in a large share of households simply being too poor to afford the costs of reasonable energy usage.

Creating robust affordability programs and ensuring these programs reach all eligible

³⁵ Ex. DAO-113, Sarah Alvarez & Emily Hopkins, *She Didn't Know She Still Owed Money to Her Utility. Then 25% of Her Paycheck Was Gone*, PROPUBLICA (Aug. 19, 2022), <https://perma.cc/56K5-83UH>, at 2.

³⁶ See Ex. DAO-107 at 29.

³⁷ See *id.* at 178, 185–86.

³⁸ See *id.* at 171, 185–86.

households should be prioritized. Affordability programs, designed and scaled appropriately, can mitigate the underlying roots of unaffordable energy costs and a cycle of collection activities and shutoffs.

III. ENERGY INSECURITY AMONG DTE ELECTRIC'S LOW-INCOME HOUSEHOLDS

Q: Please describe this section of your testimony.

A: In this Part, I summarize the extensive research on the topics of shutoffs and energy insecurity and how these impact low-income and BIPOC households. I provide a national overview as well as more specific details of energy insecurity among DTE Electric's residential customers.

Q: What are the connections between energy insecurity, poverty, and health?

A: Bednar and Reames, leading energy justice scholars, concluded: "Failing to acknowledge the risk or potential harm that may occur with living in sub-standard housing, or lack of household energy, should be regarded as a threat to national well-being and potential to rival other nations and spur economic growth."³⁹

The implications of energy insecurity are stark. Shutoffs, which stem from the combination of unaffordable gas and electric bills, can result in an array of health problems.⁴⁰ These health problems include heat illness, cognitive and psychological impacts, respiratory impacts resulting from the loss of proper ventilation and from fumes

³⁹ Ex. DAO-114, Dominic J. Bednar & Tony G. Reames, *Recognition of and Response to Energy Poverty in the United States*, NATURE ENERGY, no. 5, June 2020, at 6–7.

⁴⁰ See Ex. DAO-115, Janjala Chirakija, Seema Jayachandran & Pinchuan Ong, *Inexpensive Heating Reduces Winter Mortality* (Nat'l Bureau of Econ. Rsch., Working Paper No. 25681, 2019), at 3–4.

that may be caused by heating with an oven or an improperly ventilated generator, and those that arise from the inability to refrigerate medicine or use medical equipment that requires electricity.⁴¹ Indirect health issues arise from lack of access to hot water for proper hygiene.⁴² Energy insecurity also adversely impacts health by worsening asthma, chronic stress, mental health, and heart conditions.⁴³ Energy insecurity, and shutoffs in particular, shorten life spans. For example, Hurricane Beryl, which made landfall in Texas on July 8, 2024, has resulted in at least 6 deaths from heat stroke when customers lost access to power for prolonged periods.⁴⁴ Another study simulated deaths in Detroit from a simultaneous heat wave and power outage scenario, predicting a 787% increase in mortality rate when power is out by 2085.⁴⁵ Whether one's lack of power is caused by a grid outage or a DTE shutoff, the consequences, which can be fatal, are the same.

Energy insecurity also significantly increases the risk that households will slide into and remain in poverty, which increases mortality risks. An energy burden above 10% increases a household's likelihood of falling into and persist in poverty by 50–100%.⁴⁶ Statistically, once a household falls into poverty, the life expectancies of the household's members are significantly reduced. Men and women living below 200% of FPL at age

⁴¹ See Ex. DAO-116, Michelle Graff, David M. Konisky, Sanya Carley & Trevor Memmott, *Climate Change and Energy Insecurity: A Growing Need for Policy Intervention*, 15 ENV'T JUST, no. 2, 2022, at 1-2; Ex. DAO-103 at 6, 8.

⁴² See Ex. DAO-117, Sonal Jessel, Samantha Sawyer & Diana Hernández, *Energy, Poverty, and Health in Climate Change: A Comprehensive Review of an Emerging Literature*, 7 FRONTIERS IN PUB. HEALTH, Dec. 2019, at 1, 5, 6, 11.

⁴³ See *id.* at 11; Ex. DAO-103 at 6.

⁴⁴ Ex. DAO-118, Adam Zuvanich, *Hurricane Beryl caused at least 20 Houston-area deaths, with half power outage-related*, HOUSTON PUBLIC MEDIA (Jul. 18, 2024) at 2-3, <https://www.houstonpublicmedia.org/articles/news/hurricane/2024/07/18/494068/hurricane-beryl-deaths-houston-at-least-20-half-power-outage-related/>.

⁴⁵ Ex. DAO-119, Brian Stone, Jr. et al., *How Blackouts during Heat Waves Amplify Mortality and Morbidity Risk*, 57 ENVIRON. SCI. TECHNOL. 8245 (2023) at 6-7.

⁴⁶ See Ex. DAO-120, Jeremiah Bohr & Anna C. McCreery, *Do Energy Burdens contribute to Economic Poverty in the United States? A Panel Analysis*, 99 SOC. FORCES, no. 1, Sept. 2020, at 1.

1 eighteen can expect their lives to be more than ten years shorter than people living at more
2 than 400% of FPL.⁴⁷

3
4 **Q: What is the scope of the impacts from energy insecurity, nationally and in Michigan?**

5 **A:** In the United States, 27.2% of households experience some form of energy insecurity.⁴⁸

6 The Pulse Survey, conducted biweekly by the U.S. Census since the start of COVID-19,
7 includes three questions about energy insecurity. As the report for February 6 to March 4,
8 2024 finds, 33.2% of Michigan households reported some frequency of foregoing other
9 basic needs (including 49.0% of Hispanic and 46.7% of Black households), 19.9% reported
10 keeping the home at an unsafe or uncomfortable temperature, and 25.8% reported being
11 unable to pay the energy bill in full.⁴⁹

12 Energy insecurity is *highly variable* by population. Multiple studies have confirmed
13 that energy insecurity impacts LMI, Black, and Hispanic households, and households with
14 children, especially under six years old, disproportionately.⁵⁰

15 This trend can be seen in Michigan as well. Consider that energy insecurity is
16 experienced more by:

⁴⁷ See Ex. DAO-121, Gopal K. Singh & Hyunjung Lee, *Marked Disparities in Life Expectancy by Education, Poverty Level, Occupation, and Housing Tenure in the United States*, INT'L J. OF MATERNAL & CHILD HEALTH & AIDS, no. 10, 2021, at 1, 3–6.

⁴⁸ Ex. DAO-104 at 1.

⁴⁹ These figures are located in column C of Ex. DAO-122, JS Working Paper 2.

⁵⁰ See, e.g., Ex. DAO-123, ARIEL DREHOBL & LAUREN ROSS, AM. COUNCIL FOR AN ENERGY-EFFICIENT ECON., *LIFTING THE HIGH ENERGY BURDEN IN AMERICA'S LARGEST CITIES: HOW ENERGY EFFICIENCY CAN IMPROVE LOW INCOME AND UNDERSERVED COMMUNITIES* (2016), at 19; Ex. DAO-124, MARILYN A. BROWN, ET AL., OAK RIDGE NAT'L LAB'Y, *LOW-INCOME ENERGY AFFORDABILITY: CONCLUSIONS FROM A LITERATURE REVIEW* (2020), at 23; Ex. DAO-125, SANYA CARLEY, ET AL., ENERGY JUST. LAB, IND. UNIV., *HOUSEHOLD ENERGY INSECURITY SURVEY, WINTER 2021–2022* (2022), at 4; see also Ex. DAO-126, Trevor Memmott, et al., *Sociodemographic Disparities in Energy Insecurity Among Low-Income Households Before and During the COVID-19 Pandemic*, 6 NATURE ENERGY, no. 2, 2021, at 1.

- 1 • Women (36.8%) than men (29.4%);
- 2 • Black (46.7%), Hispanic (49.0%), biracial, non-Asian, and nonwhite descent
- 3 (53.0%) than whites (25.3%);
- 4 • Young people ages eighteen to twenty-four (60.3%) than people over sixty-five
- 5 (15.6%);
- 6 • People with less education (e.g., without high school diplomas, 55.5%) than people
- 7 with bachelor's degrees (19.0%);
- 8 • Households with children (40.0%) than without (29.9%); and
- 9 • People with a disability (46.0%) than without (30.5%).⁵¹

10 In other words, while energy insecurity is on average a concern for one-third of
 11 Michiganders, households of marginalized groups face rates of energy insecurity between
 12 50 and 350% higher than their better-off counterparts.

13 This data is also largely reflective of DTE Electric customers. DTE Electric's
 14 territory spans about half the population of the state and includes a mix of rural, urban, and
 15 suburban communities. While not a perfect reflection of Michigan's demographics and
 16 experiences of energy insecurity, I believe the Pulse Survey data accurately reflects the
 17 same trends in disparities experienced by DTE Electric customers.

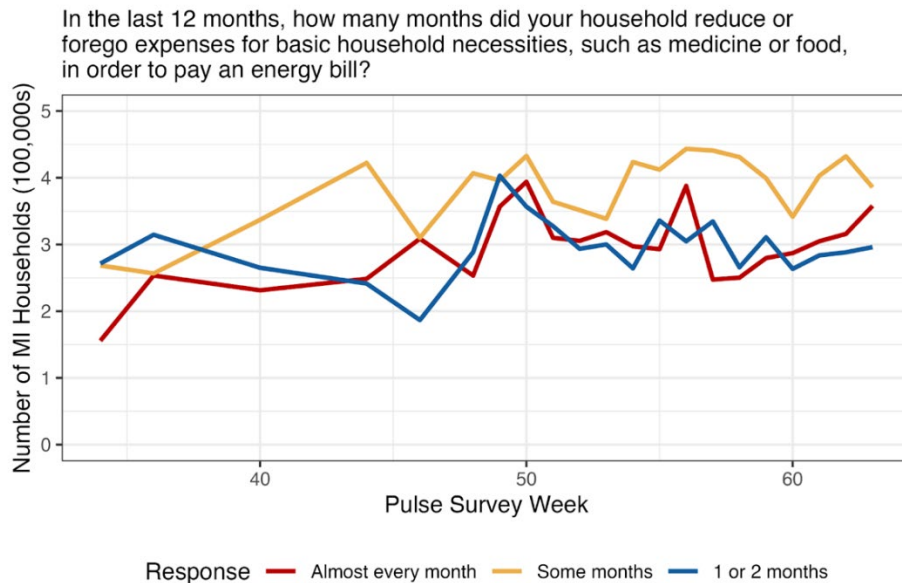
⁵¹ Ex. DAO-126 at 2-3.

Q: How does energy insecurity among DTE Electric customers now compare to 2020, during the start of the pandemic?

A: In 2020, there was widespread acceptance of COVID-19 as an “unanticipated emergency” and the authority of the Commission for “active participation” in addressing the crisis.⁵² But the fact is that even though the pandemic has subsided, the conditions of energy insecurity that made COVID-19 more perilous persist.

Energy insecurity in Michigan, as measured by the Pulse Survey (Figures 2–4), has increased slightly since mid-2021, when the surveys began. Each of these factors increases the likelihood of a shutoff. While shutoffs may have been *even more harmful* during the height of the pandemic, my testimony concludes that the consequences of shutoffs during “normal” times can be dire.

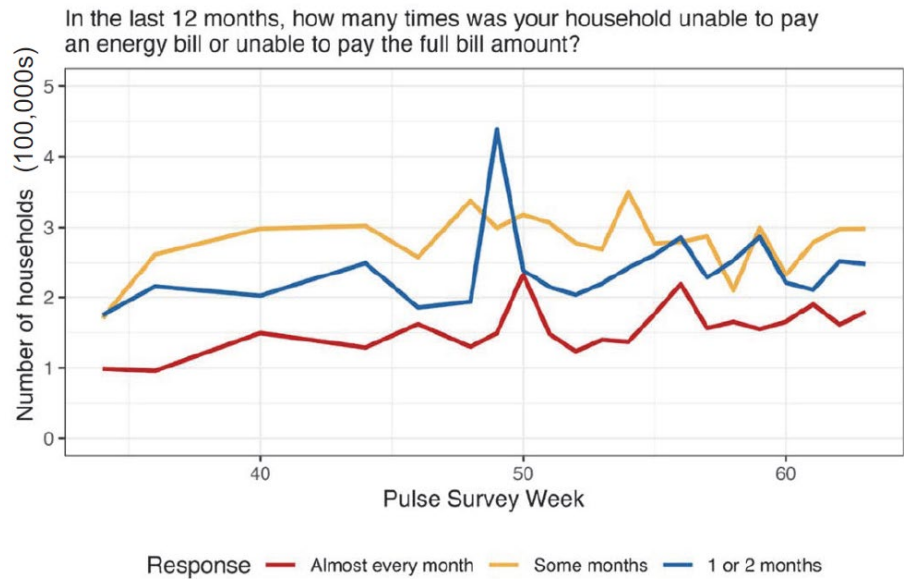
*Figure 1: Michigan households foregoing basic needs, July 2021–Oct. 2023.*⁵³



⁵² *In re Response to COVID-19*, MPSC Case No. U-20757, Order (Apr. 15, 2020), at 3 [hereinafter Apr. 15, 2020 U-20757 Order].

⁵³ This figure is based on data from the Pulse Survey (available at <https://www.census.gov/programs-surveys/household-pulse-survey/datasets.html>); the code used to analyze the data and generate these

1 *Figure 2: Michigan households unable to pay the bill, July 2021–Oct. 2023.⁵⁴*

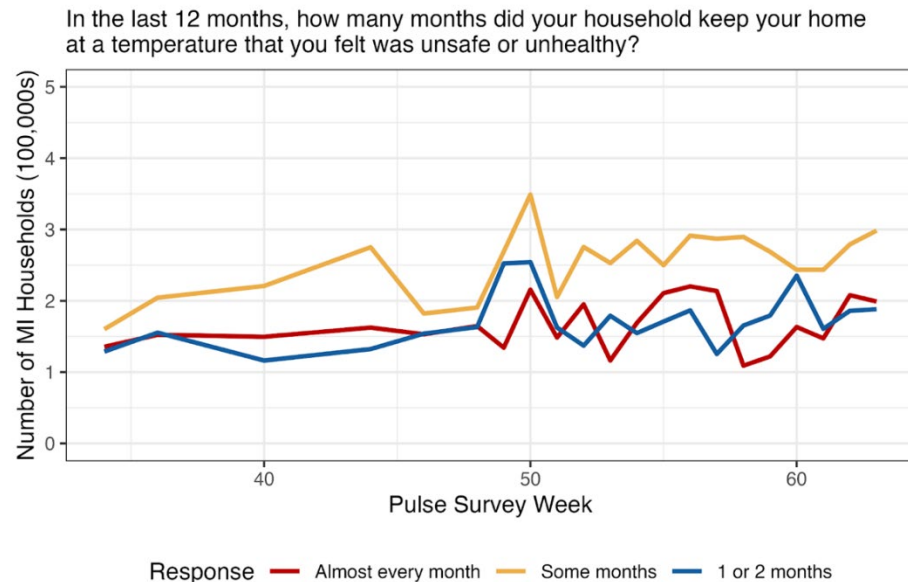


2

results is contained in pulse_survey_results.Rmd at https://github.com/Energy-Equity-Project/DTE_analysis/tree/main.

⁵⁴ This figure is based on data from the Pulse Survey (available at <https://www.census.gov/programs-surveys/household-pulse-survey/datasets.html>); the code used to analyze the data and generate these results is contained in pulse_survey_results.Rmd at https://github.com/Energy-Equity-Project/DTE_analysis/tree/main.

Figure 3: Michigan households keeping homes at unsafe temperatures,
July 2021–Oct. 2023.⁵⁵



Q: How do you determine if a household cannot reasonably afford to pay its energy bill?

A: An array of energy affordability advocates have established that spending no more than 6% of household income on energy is affordable.⁵⁶ This 6% energy burden threshold was established by considering that households should spend no more than 30% of their incomes on all costs of housing and that energy should comprise no more than one-fifth of total housing costs.⁵⁷ For electricity, a 3% burden is considered affordable.⁵⁸

⁵⁵ This figure is based on data from the Pulse Survey (available at <https://www.census.gov/programs-surveys/household-pulse-survey/datasets.html>); the code used to analyze the data and generate these results is contained in pulse_survey_results.Rmd at https://github.com/Energy-Equity-Project/DTE_analysis/tree/main.

⁵⁶ Ex. DAO-124 at 22.

⁵⁷ *Id.* at 20.

⁵⁸ Gas and electric costs in MI are close enough to equivalent that an even split for affordability purposes makes sense. *See also* Ex. DAO-127, Ill. Com. Comm'n Docket Nos. 23-0068 & 23-0069, Colton Direct Testimony (May 9, 2023), at 17–18.

1 **Q: How do DTE Electric's customers experience energy injustice?**

2 **A:** Energy injustice is a national problem, with about one-third of Americans experiencing
3 some form of energy insecurity.⁵⁹ Unfortunately, DTE Electric's reporting on indicators of
4 energy insecurity and energy injustice is limited, so in some cases, I present statewide data
5 as the best available source.

6 Here, I highlight two aspects of energy injustice: (1) energy insecurity and
7 (2) shutoffs. These are not the only forms of energy injustice DTE Electric customers face.
8 The proximity to fossil fuel infrastructure, lack of access to incentives and rebates for
9 energy efficiency and clean energy, disproportionate rates of power outages, and limited
10 access to clean energy jobs and business contracts are additional concerns for which data
11 is less readily available.

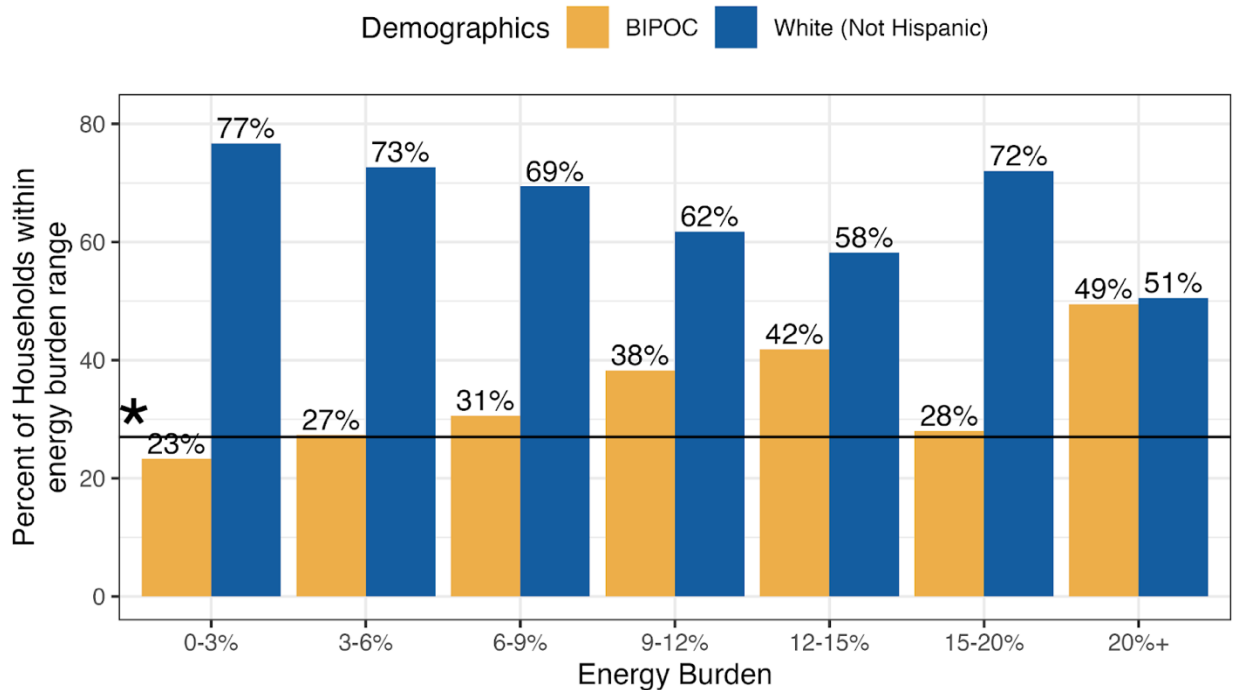
12 In Michigan, affordable energy burdens that cost less than 6% of income are
13 disproportionately distributed among white households. My colleague Rahul Agrawal
14 Bejarano, Lead Data Scientist at Energy Equity Project,⁶⁰ analyzed DOE energy burden
15 data by census tract. The results show that BIPOC households, which comprise 26% of the
16 Michigan population,⁶¹ represent a disproportionate share of energy burdens above 6%, as
17 shown below.

⁵⁹ See Ex. DAO-122 at 1. From the data, 71.8 million (34.3%) households report reducing or foregoing basic necessities at least one or two months out of 209.3 million households reporting.

⁶⁰ Ex. DAO-128, Rahul Agrawal Bejarano CV & Summary of Qualifications.

⁶¹ Ex. DAO-129, *Quick Facts: Michigan*, U.S. CENSUS BUREAU (last accessed May 5, 2024), <https://perma.cc/DFN9-WKP5>, at 1. The percentage of those who are white Alone, and not Hispanic or Latino, is 74.0%.

Figure 4: Distribution of energy burdens distribution by race and income.⁶²



*Expected BIPOC levels as 27% of Michigan households are BIPOC

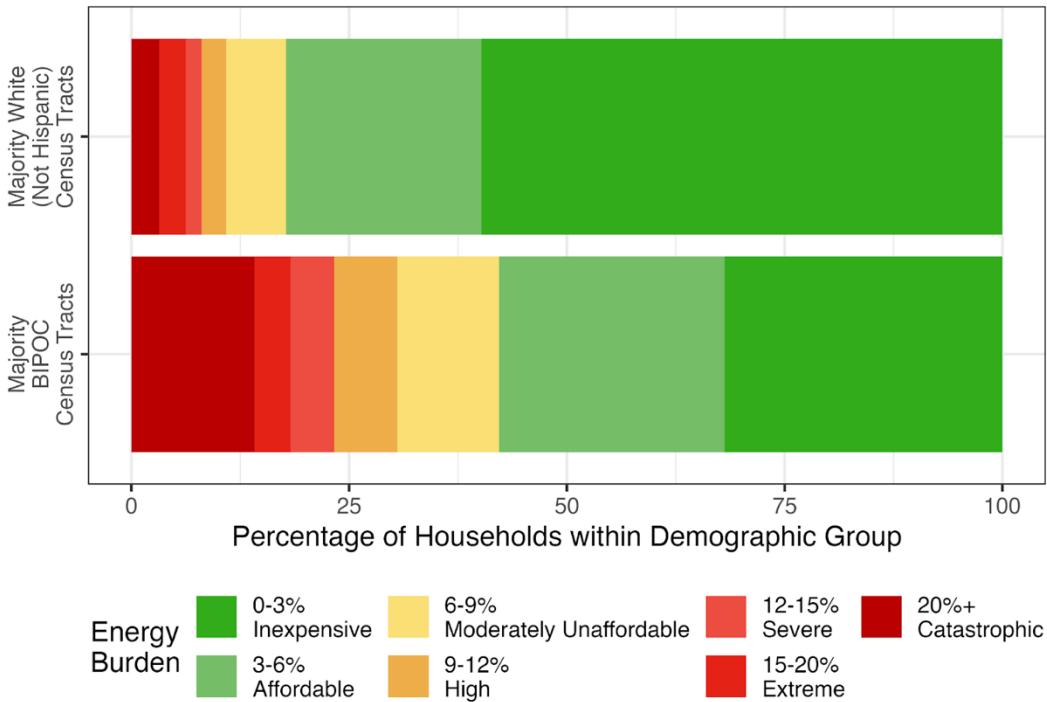
Furthermore, households in majority BIPOC census tracts are 2.4 times more likely to have an energy burden that exceeds 6% and 2.9 times more likely to have an energy burden greater than 12%.⁶³ For 23% of households in majority BIPOC census tracts, energy burdens exceed 12% to 20% of income, which we categorize as “severe” to “catastrophic.”⁶⁴

⁶² This figure is based on energy burden data available from the U.S. Department of Energy Low-income Energy Affordability Data (<https://www.energy.gov/scep/slsc/lead-tool>); Michigan census tract information from the U.S. Census Bureau (<https://www.census.gov/cgi-bin/geo/shapefiles/index.php?year=2010&layergroup=Census+Tracts>); and DTE service territory data (<https://atlas.eia.gov/datasets/f4cd55044b924fed9bc8b64022966097/explore?filters=eyJJOQU1FIjpbIkRURSBFTeVDVFJJQyBBDT01QQU5ZII19&location=42.911225%2C-81.880048%2C6.78>). The code used to analyze the data and generate these results is contained in Doe_lead_profiles_fpl.Rmd at https://github.com/Energy-Equity-Project/DTE_analysis/tree/main.

⁶³ Ex. DAO-130, JS Workpaper 3.

⁶⁴ Ex. DAO-130, JS Workpaper 3.

Figure 5: Energy burden distribution among majority BIPOC vs. white census tracts in Michigan.⁶⁵



Consequently, in census tracts with incomes below 150% of FPL and extreme energy burdens above 20%, the median Black population is 92%.⁶⁶ Ninety percent (163 out of 181) of these tracts are located in Wayne County, which is within DTE’s electric-gas combination service territory.⁶⁷

⁶⁵ This figure is based on energy burden data available from the U.S. Department of Energy Low-income Energy Affordability Data (<https://www.energy.gov/scep/slsc/lead-tool>); Michigan census tract information from the U.S. Census Bureau (<https://www.census.gov/cgi-bin/geo/shapefiles/index.php?year=2010&layergroup=Census+Tracts>); and DTE service territory data (<https://atlas.eia.gov/datasets/f4cd55044b924fed9bc8b64022966097/explore?filters=eyJJOQU1FIjpbIkRURSBFTFVDFVJJQyBDT01QQU5ZII19&location=42.911225%2C-81.880048%2C6.78>). The code used to analyze the data and generate these results is contained in Doe_lead_profiles_fpl.Rmd at https://github.com/Energy-Equity-Project/DTE_analysis/tree/main.

⁶⁶ I calculated the median Black population based on the values in the rightmost column of Figure 7.

⁶⁷ Ex. DAO-131, JS Workpaper 4 (data from Climate and Economic Justice Screening Tool, noted in rows 4–5). I filtered for Michigan census tracts with energy burdens above 20%. In rows 934–38, I did a count showing 163 out of 181 of these high energy burden tracts are in DTE territory.

Figure 6: Percent Black population among the most energy burdened, low-income census tracts.⁶⁸

Location	Energy Burden (% income)	Avg. Annual Energy Cost (\$)	Household Income	Black/ African American (% pop.)
Census Tract 5112, Wayne County	49	\$3,536	\$7,221	93
Census Tract 5382, Wayne County	45	\$3,869	\$8,589	94
Census Tract 5301, Wayne County	42	\$2,900	\$6,931	99
Census Tract 5231, Wayne County	39	\$3,009	\$7,651	18
Census Tract 5313, Wayne County	39	\$3,000	\$7,622	94
Census Tract 1527, Oakland County	38	\$2,658	\$7,036	3
Census Tract 9854, Wayne County	36	\$3,174	\$8,764	0
Census Tract 5451, Wayne County	35	\$2,793	\$7,996	97
Census Tract 5452, Wayne County	35	\$3,524	\$10,192	100
Census Tract 5002, Wayne County	32	\$3,491	\$10,818	99
Census Tract 5071, Wayne County	32	\$3,137	\$9,934	96
Census Tract 5190, Wayne County	31	\$2,910	\$9,438	90
Census Tract 5265, Wayne County	30	\$2,896	\$9,738	81
Census Tract 5393, Wayne County	30	\$3,537	\$11,758	100
Census Tract 5113, Wayne County	29	\$3,709	\$12,639	39
Census Tract 5333, Wayne County	29	\$3,109	\$10,810	91
Census Tract 5391, Wayne County	29	\$3,591	\$12,206	98
Census Tract 5406, Wayne County	29	\$2,752	\$9,399	78
Census Tract 5074, Wayne County	28	\$3,152	\$11,401	97
Census Tract 5303, Wayne County	28	\$3,990	\$14,065	97

We also identified severe disparities in energy burdens on the basis of income. Our data indicates that 59% of DTE residential customers⁶⁹ earning less than 30% of Area Median Income⁷⁰ (AMI) have extreme energy burdens of 15% or more.⁷¹ Of note, many

⁶⁸ See Ex. DAO-131.

⁶⁹ This is inclusive of both DTE Gas and DTE Electric customers; we did not have data for DTE Electric customers alone to conduct the analysis.

⁷⁰ This is close to 100% of FPL, depending on household size.

⁷¹ See Figure 8 below.

1 of these households are likely already using less energy than they need.⁷² Moreover, 45%
 2 of Michigan households earning less than \$25,000 keep their home at an unsafe or
 3 uncomfortable temperature, and 35% of households earning \$25,000–\$34,999 also do so.⁷³

4 Another metric commonly used to assess affordability is the Home Energy
 5 Affordability Gap (HEAG),⁷⁴ which represents the cost above an affordable 6% energy
 6 burden that a household pays. For example, if a household earning \$20,000 can afford a
 7 6% energy burden of \$1,200, then if this household faced an annual bill of \$3,000, it would
 8 have a HEAG of \$1,800. Michigan households below 30% of AMI with energy burdens
 9 above 15% face HEAGs that are nearly \$2,000 more than they can afford annually, as
 10 shown in Figure 8 below. Witness Kinkhabwala discusses the HEAG in more detail in his
 11 testimony.

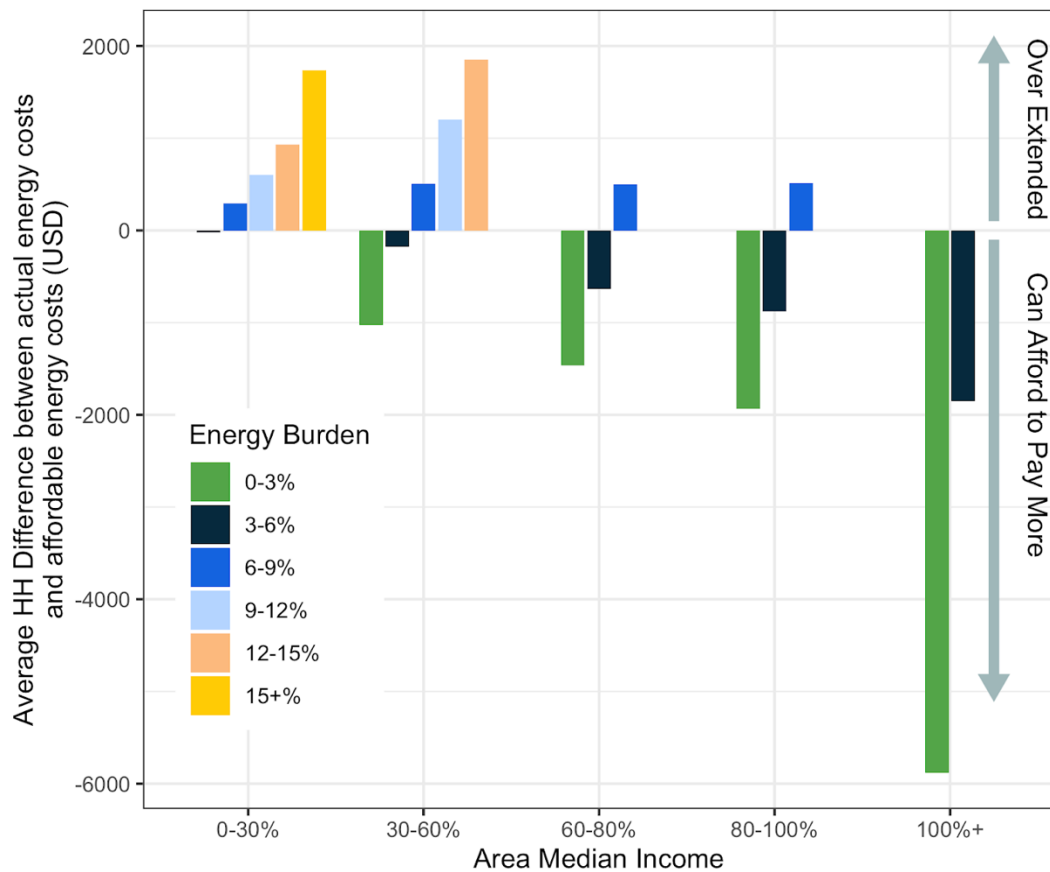
⁷² Ex. DAO-132, Shuchen Cong, et al. *Unveiling Hidden Energy Poverty Using the Energy Equality Gap*, 13 NATURE COMM'NS, 2022, at 1, 2.

⁷³ Ex. DAO-130, JS Working Paper 3.

⁷⁴ Ex. DAO-133, *Introduction*, HOME ENERGY AFFORDABILITY GAP (last accessed May 5, 2024), <https://perma.cc/5GX4-BDWX>, at 1.

1

Figure 7: Michigan home energy affordability gap by income.⁷⁵



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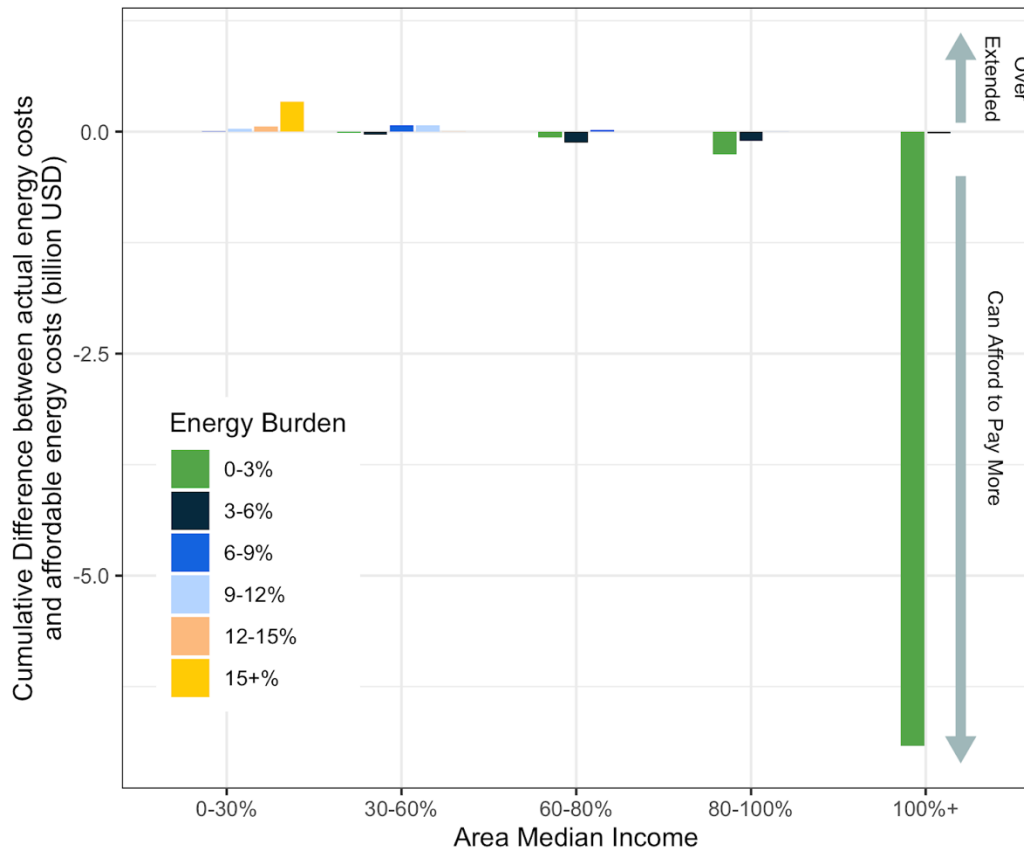
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Households that have affordable energy burdens have negative HEAGs—they can afford to spend more than they actually do on energy. Figure 8 shows that households above 100% AMI and with energy burdens below 3% could afford to spend \$5,800 more per year than they currently do on energy and still have an affordable energy burden of less than 6%.

⁷⁵ This figure is based on energy burden data available from the U.S. Department of Energy Low-income Energy Affordability Data (<https://www.energy.gov/scep/slsc/lead-tool>); Michigan census tract information from the U.S. Census Bureau (<https://www.census.gov/cgi-bin/geo/shapefiles/index.php?year=2010&layergroup=Census+Tracts>); and DTE service territory data (<https://atlas.eia.gov/datasets/f4cd55044b924fed9bc8b64022966097/explore?filters=eyJJOQU1FIjpbIkRURSBFTFVDFVJJQyBDT01QQU5ZII19&location=42.911225%2C-81.880048%2C6.78>). The code used to analyze the data and generate these results is contained in `Doe_lead_profiles_ami.Rmd` at https://github.com/Energy-Equity-Project/DTE_analysis/tree/main.

Collectively, as shown in Figure 9, there is a \$6.9 billion net surplus of what Michigan households above 100% AMI can afford to pay to achieve a 6% energy burden. It would take just 8.7% of this surplus to eliminate the combined \$601 million home energy affordability gap experienced by all customers with energy burdens above 6%.

Figure 8: Collective surplus and deficit of home energy affordability gaps.⁷⁶



⁷⁶ This figure is based on energy burden data available from the U.S. Department of Energy Low-income Energy Affordability Data (<https://www.energy.gov/scep/slsc/lead-tool>); Michigan census tract information from the U.S. Census Bureau (<https://www.census.gov/cgi-bin/geo/shapefiles/index.php?year=2010&layergroup=Census+Tracts>); and DTE service territory data (<https://atlas.eia.gov/datasets/f4cd55044b924fed9bc8b64022966097/explore?filters=eyJJOQU1FIjpbIkRURSBFTFVVDVFJJQyBDT01QQU5ZII19&location=42.911225%2C-81.880048%2C6.78>). The code used to analyze the data and generate these results is contained in `Doe_lead_profiles_ami.Rmd` at https://github.com/Energy-Equity-Project/DTE_analysis/tree/main.

In sum, the distributive inequities of energy burdens by race and class can be easily rectified through a modest reallocation of costs among low-income vs. non-low-income customers. I return to this point in my recommendations to MPSC in Part VI.

Q: What is the relationship between energy burdens and shutoffs?

A: Shutoffs are the result of unaffordable energy burdens. When they cannot pay their energy bills, many households make the painful decision to forego other basic needs and to under consume energy—keeping their homes at unreasonably cold or hot temperatures that harm their physical and mental health.⁷⁷ Because of the patterns of shuffling between which essential needs a household can afford and how much discomfort it can tolerate, it is important to note that, by the time DTE Gas or DTE Electric shuts off service, a household has likely already endured a series of struggles.

Q: Please explain how DTE Electric reports shutoffs and any challenges you encountered with its reports.

A: DTE Electric reports shutoffs on both a quarterly and monthly basis in response to two orders from MPSC Case Nos. U-20757⁷⁸ and U-18120.⁷⁹ The number of shutoffs initiated by DTE was not immediately clear to me due to confusing nuances in the reporting measures and practices of each report. Prior to the order in MPSC Case No. U-20757, DTE reported shutoffs on a quarterly basis.⁸⁰ Beginning with MPSC Case No. U-20757, DTE

⁷⁷ Ex. DAO-107 at 1, 6.

⁷⁸ See generally U-20757 Order (Apr. 15, 2020).

⁷⁹ See generally *In re Billing of Residential & Nonresidential Customers*, MPSC Case No. U-18120, Order (Apr. 28, 2017).

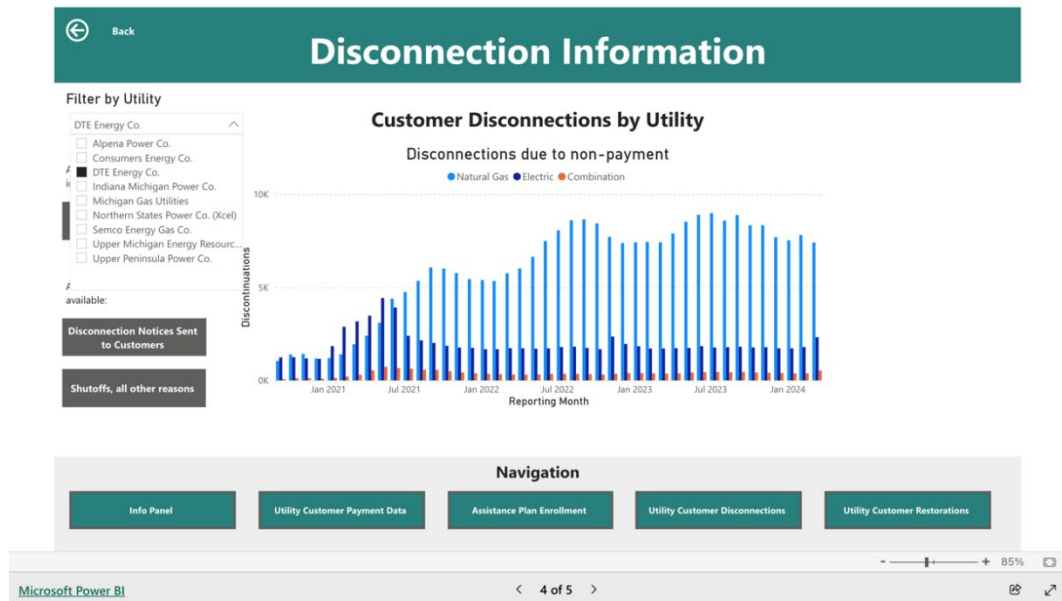
⁸⁰ See generally, e.g., Ex. DAO-134, DTE, REVISED QUARTERLY REPORT FOR 1ST, 2ND, AND 3RD QUARTERS OF 2023(2023) (providing a sample quarterly report submitted by DTE).

1 began to report on arrearages, enrollments in affordable payment plans, reconnections, and
2 shutoffs on a monthly basis.⁸¹ The shutoff reports, however, actually reflect the “[t]otal
3 number of residential premises that were disconnected from 11/1/2019 to the last day of
4 the reporting month that have not been restored as of [the last day of the reporting period].
5 It is not the number of any residential disconnects for any given month.”⁸² Importantly,
6 what is presented on the MPSC Utility Customer Database, per Figure 10 below, as the
7 number of monthly shutoffs is actually the net number of customers who lost service and
8 have not had service restored. This visual makes it appear that monthly shutoffs never
9 exceeded 10,000, but this is not the case. As shown below in Figure 11, when analyzing
10 the Quarterly Reports, Mr. Agrawal Bejarano found that DTE shut off customers more than
11 20,000 times in many months, and 717,121 times between 2020 and 2023, even accounting
12 for the brief voluntary pause from March–June 2020.

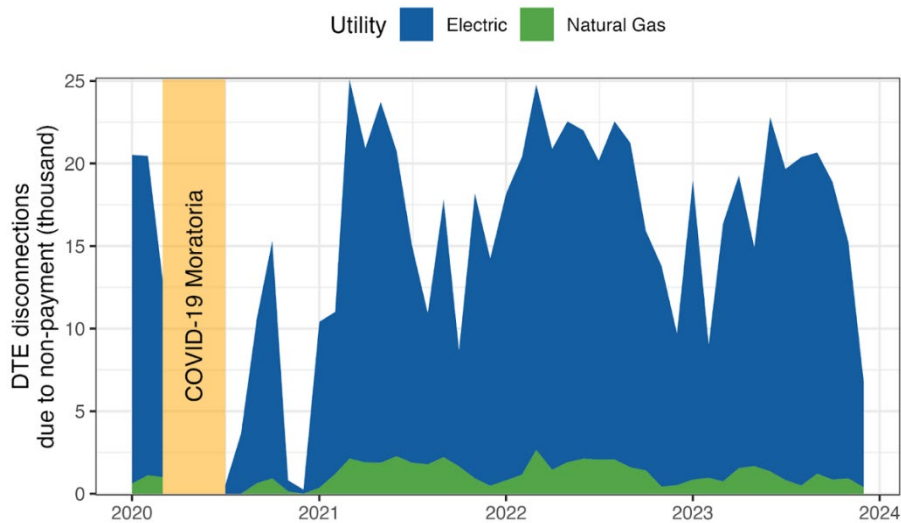
⁸¹ *In re Response to COVID-19*, MPSC Case No. U-20757, MPSC Order (July 23, 2020), at 3.

⁸² Ex. DAO-135, DTE’s Response to FLO’s First Discovery Request, FLODG-1.3, at 2

1 *Figure 9: DTE monthly shutoffs as presented on the MPSC website.⁸³*



2
3 *Figure 10: Actual monthly shutoffs by DTE, 2020–2023.⁸⁴*



*Based on DTE Quarterly Report to MPSC Case U-18120, Rule 460.151

⁸³ *Disconnection Information: Customer Disconnections by Utility*, MICH. PUB. SERV. COMM’N (last accessed Apr. 16, 2024), <https://www.michigan.gov/mpsc/regulatory/reports/other/utility-customer-data>.

⁸⁴ This figure is based on DTE Quarterly Reports submitted to the docket in MPSC Case No. U-18120 (<https://mi-psc.my.site.com/s/global-search/U-18120%20DTE%20Quarterly>); the code used to analyze the data and generate these results is contained in `dte_quarterly_results.Rmd` at https://github.com/Energy-Equity-Project/DTE_analysis/tree/main.

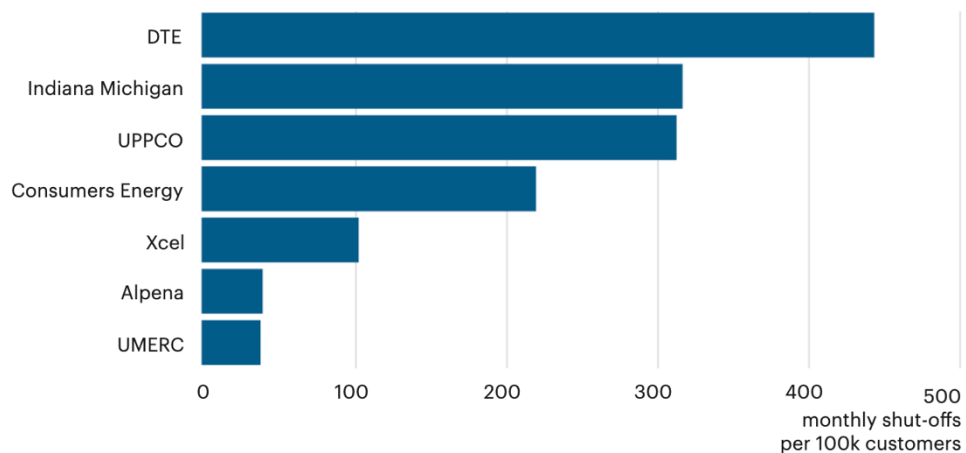
Q: What is the magnitude and trend of shutoffs conducted by DTE?

A: As I noted above, DTE Energy shut off customers more than 717,000 times from 2020 to 2023. DTE's shutoffs, both the rate and total number, far exceed even the practices of its investor-owned peers. For example, Figure 12 below shows that DTE Electric shut off customers at twice the rate of Consumers Energy.

Figure 11: DTE Electric shutoff rates vs. peer utilities.⁸⁵

DTE's Rate of Shut-offs Outpaced Others During Pandemic

From April 2020 to December 2021, DTE's average monthly shut-offs for nonpayment per 100,000 customers far outpaced Michigan's other investor-owned electricity providers.



Agnel Philip/ProPublica. Source: Michigan Public Service Commission.

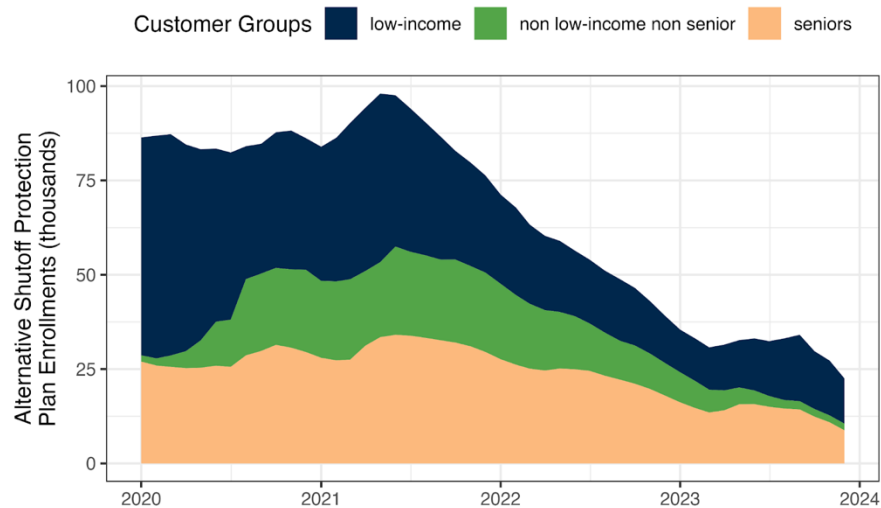
DTE's shutoff totals and rates have remained fairly steady through this period as a whole, with notable seasonal spikes seen in Figure 10 above.

⁸⁵ Ex. DAO-136, Sarah Alvarez, *Lights Out: Profitable Utility Company Shut Off Electricity to Homes Hundreds of Thousands of Times*, PROPUBLICA (Mar. 18, 2022), <https://www.propublica.org/article/lights-out-profitable-utility-company-shut-off-electricity-to-homes-hundreds-of-thousands-of-times>, at 2.

Q: How do shutoffs correspond to enrollment in affordable payment plans?

A: Enrollment in DTE Energy's affordable payment plans has declined precipitously, dropping 63% between 2020 and 2023, according to Figure 13 below. The reason for this decline is not clear.

Figure 12: Declining enrollment in shutoff protection plans, 2020–2023.⁸⁶



*Based on DTE Quarterly Report to MPSC Case U-18120, Rule 460.151

IV. ASSESSING DTE'S APPROACH TO ENERGY AFFORDABILITY AND SECURITY

Q: Do you have any concerns about how DTE Electric assigns the responsibility for its energy affordability programs?

A: Yes. The Director of Revenue Management and Protection, a position held by Witness Jason Sparks, is responsible for programs that may be at odds with each other. Managing

⁸⁶ This figure is based on DTE Quarterly Reports submitted to the docket in MPSC Case No. U-18120 (<https://mi-psc.my.site.com/s/global-search/U-18120%20%20DTE%20Quarterly>); the code used to analyze the data and generate these results is contained in `dte_quarterly_results.Rmd` at https://github.com/Energy-Equity-Project/DTE_analysis/tree/main.

collections and theft focuses on maximizing customer payments and penalizing noncompliance. However, the position held by Witness Sparks also oversees low-income programs, which, in theory, aim to provide holistic support for customers who cannot afford their bills.⁸⁷ By assigning both punitive and supportive approaches to the role in which Witness Sparks serves, DTE creates a position that inherently has a conflict of interest. DTE tasks the person in Witness Sparks's role with juggling these competing interests, which means the Company structurally cannot commit to address the needs of energy affordability fully.

Q: How does DTE describe affordability issues?

A: Witness Sparks mentions energy affordability in several different contexts. For example, Witness Sparks describes the energy affordability gap experienced by customers earning minimum wage.⁸⁸ Witness Sparks also considers a range of affordability definitions, including a living wage calculation from the Massachusetts Institute of Technology that is specific to the Detroit Metro Statistical Area, multiple thresholds of the Federal Poverty Level, and ALICE (Asset Limited, Income Constrained, Employed) households.⁸⁹ However, Witness Sparks's characterization of the number of households consistently unable to afford their DTE bills is misguided. He states that households earning less than 250% of FPL will be unable to afford their bills consistently, which is a reasonable assumption.⁹⁰ However, he references a figure of at least 1% of Detroit customers being

⁸⁷ See Sparks Direct Testimony at 1–2.

⁸⁸ Sparks Direct Testimony at 11–12

⁸⁹ *Id.*

⁹⁰ *Id.*

1 unable to pay their bills.⁹¹ However, data from the Pulse Survey and LEAD Tool shows
 2 that the number of customers unable to pay their bills in Detroit is likely much higher. In
 3 March 2024, 33.2% of Michigan residents reported foregoing basic needs to pay their
 4 energy bill for at least one or two months in the last year.⁹² Thus, while DTE appears to
 5 have a general awareness of poverty and affordability metrics, it has not translated this
 6 knowledge into a cohesive understanding of energy insecurity among DTE customers.

7
 8 **Q: How would you characterize DTE’s stated goals of its energy assistance programs?**

9 A: Witness Sparks describes the goals in their direct testimony on pages 4-6. Most
 10 importantly, to claim the “foremost goal” of energy assistance programs is to “strive to
 11 prevent service interruptions”⁹³ while shutoffs have only *increased* in recent years is
 12 disingenuous. If the Company were in fact doing everything in its power to prevent
 13 shutoffs, both its energy assistance programs and its shutoff and collection practices
 14 would look very different, as discussed more in depth below. One must conclude that
 15 either DTE is not serious about this goal or it is dramatically failing to make progress and
 16 is incapable of fulfilling it. Neither rationale will be much comfort to the tens of
 17 thousands of customers experiencing shutoffs every year.

18 It is telling that the goal of Consumption Reduction does not mention EWR
 19 programs, weatherization, or solar, but instead focuses on “education, incentives, and

⁹¹ *Id.*

⁹² See Ex. DAO-122, Energy Insecurity in Michigan (U.S. Census Pulse Survey) (Mar. 4, 2024), at 7. This data comes from the February 6 - March 4, 2024, Cycle 2 survey. Analysis of the Michigan tab in the Excel file involved calculating the ratio of customers foregoing other basic necessities (almost every month, some months, or one or two months) to those never foregoing basic necessities to pay energy bills. Nonreporters were excluded from this calculation.

⁹³ Sparks Direct at 4, lines 18-21.

1 awareness campaigns.”⁹⁴ Reducing energy consumption through behavior change has
 2 shown positive results in studies, but efficiency improvements to the home are far more
 3 important and yield more durable savings.⁹⁵

4 DTE’s goals also infer that residents have more control over their situations than
 5 they reasonably do. The Company seeks to help residents “curb wasteful energy
 6 practices[,]”⁹⁶ even though much of the burden lower-income households face is due to
 7 energy-inefficient housing.⁹⁷ Similarly, the goals seek to “promote responsible payment
 8 behaviors,” “a habit of regular bill payments,” “better financial management and energy-
 9 saving practices,” and to “equip customers with the tools to afford the actual costs of their
 10 energy consumption over time.”⁹⁸ These statements imply that customers are using
 11 energy wastefully. The root of the affordability problem, which DTE fails to
 12 acknowledge, is structural energy poverty. DTE has failed to keep energy costs
 13 affordable, charging LMI customers with the costs of grid improvements, energy
 14 efficiency programs, favorable rate structures and discounts that accrue in wealthy
 15 communities and generate very favorable shareholder returns. After decades of neglect
 16 and requiring LMI households to subsidize those who can already afford to participate in
 17 these programs, DTE is attempting to ascribe financial responsibility in the face of

⁹⁴ Sparks Direct at 5, lines 6-9.

⁹⁵ For instance, Allcott, in Ex. DAO-137, Hunt Allcott, Impact of Behavior Programs (2009), found energy savings from an O-Power behavioral intervention to be about 2%; these savings quickly disappeared when customers stopped receiving monthly reports. By contrast, evaluations of weatherization program savings have ranged from 7.5% to 23%, depending on the structure and fuel type. *See* Ex. DAO-138, Tonn et al., Impact of Weatherization Programs (2018), at 12.

⁹⁶ Sparks Direct at 5, lines 7-9.

⁹⁷ DAO-123 at 2.

⁹⁸ Sparks Direct at 5, lines 15-18.

1 another proposed rate increase. No amount of responsible energy usage and payment
2 behaviors can alleviate a 20% energy burden.

3
4 **Q: Does DTE take a systematic approach to addressing energy insecurity and**
5 **unaffordability?**

6 **A:** No. By “systematic approach” to addressing unaffordability, I mean programs that would
7 enable the vast majority, if not all, LMI customers to achieve a steady energy burden below
8 6% of income. Initially, this would entail tracking and transparently reporting changes in
9 customers’ energy bills due to requested rate increases and comparing those to income—
10 ideally at the household level or alternatively using robust and readily available census
11 tract data from five-year estimates of the American Community Survey of the U.S. Census.
12 A systematic approach would also involve more granular evaluation of shutoffs and how
13 customer assistance program enrollments result in reduced energy bills and shutoffs.

14 While DTE lists seven goals of its energy assistance programs,⁹⁹ the Company does
15 not define these goals clearly or connect them to measurable objectives. Witness Sparks
16 describes the outputs of such programs (e.g., the number of enrollees in LSP), with little
17 appreciation of the impact these programs have in fostering durable affordability and
18 energy security. If DTE used a systematic approach, the Company would report meaningful
19 progress by using metrics such as the reduction in the number of customers with severe or
20 extreme energy burdens or the reduction in bills for households participating in EWR-LI
21 programs.

⁹⁹ Sparks Direct Testimony at 11-12.

1 **Q: What is the impact of late and reconnection fees on residential customers?**

2 **A:** From 2021-23, DTE collected \$48.2 million in late fees and \$5.6 million in reconnection
 3 fees (\$53.7 million total).¹⁰⁰ For low-income customers, late fees rose steeply from an
 4 average of \$32.74 per customer per year in 2021 to \$41.16 in 2023, and account for 3.2%
 5 of their total bill in 2023.¹⁰¹

6

7 **Q: Does DTE effectively make customers aware of available credits or support their**
 8 **enrollment in energy assistance programs?**

9 **A:** Not sufficiently. Despite DTE's assertion that it already consistently advertises its low-
 10 income programs on its website, the Company's website makes no mention of the LIA
 11 credit.¹⁰² In addition, the Company provides information about the RIA credit only toward
 12 the bottom of a long list of programs, and the only link provided is to submit documents
 13 for eligibility verification. DTE provides no instructions on how to request enrollment. This
 14 is a significant barrier and poor design if the goal is to maximize the program's outreach,
 15 accessibility, and uptake.

16

17 **Q: How would you characterize DTE's attitude toward its energy assistance programs?**

18 **A:** In a word, I would characterize DTE's attitude as "resistant." In its response to the EAAC's
 19 Interim Report, DTE Energy used terms like "unworkable" on multiple occasions.¹⁰³ The

¹⁰⁰ Ex. DAO-139. JS Workpaper 5 - Customer Late Fees (adapted from data provided by Witness Sparks in Discovery Response DAAODE-1.1 - 1.5). 5 months of RIA credit x \$8.50 = \$42.50; see also Ex. DAO-140. Attachment to DTE's Response to DAAO's First Discovery Request, DAAODE 1.1-1.5.

¹⁰¹ *Id.*

¹⁰² On its website, there is not a simple link to apply, and the LIA Credit is not included in the list of fifteen programs with dropdowns at the bottom of the page). *See generally* Ex. DAO-163, *Low-Income Programs*, DTE (last accessed May 4, 2024).

¹⁰³ DTE Comments on Interim Staff Report at 2.

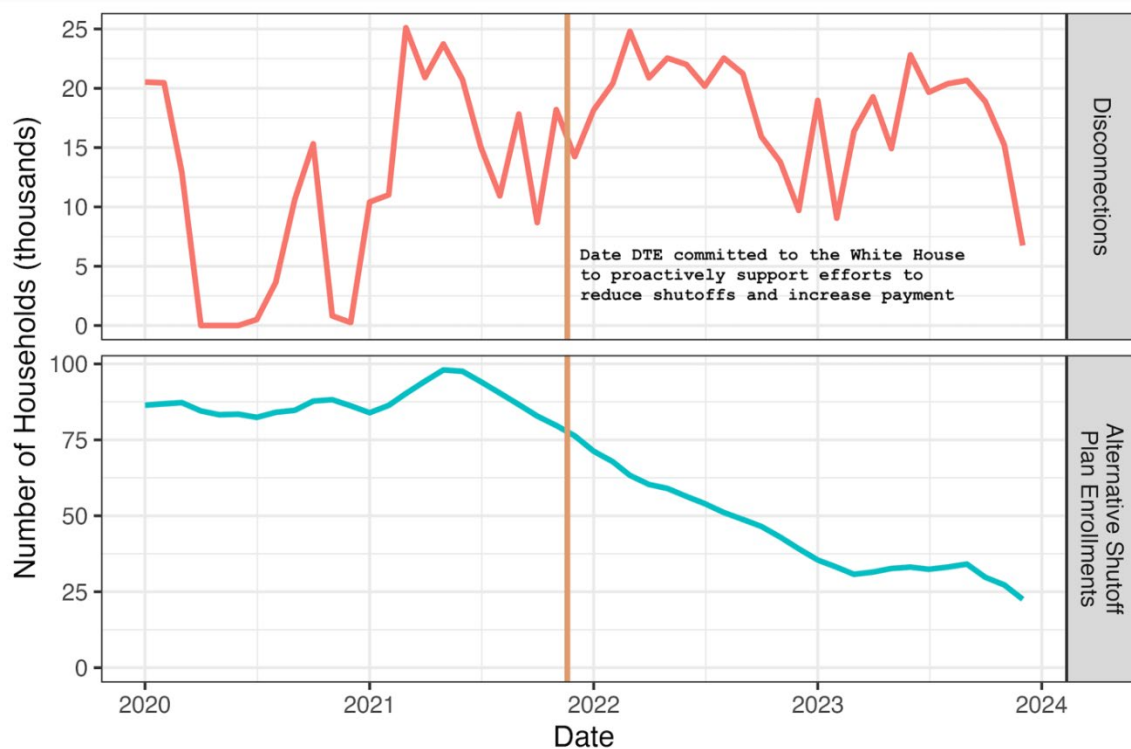
1 Company focused on why programs could not be expanded or why, in the Company's
2 opinion, it is already doing enough and does not need to consider expanding or creating
3 new programs.

4 DTE's practices run counter to its promises. DTE Energy was one of seven utilities
5 that committed in November 2021 to the White House to take five steps to reduce shutoffs
6 and the hardship of energy insecurity.¹⁰⁴ These steps included commitments to identify,
7 directly screen and notify all potentially eligible recipients; to expedite assistance to
8 vulnerable households; and to stop shutoffs to households in the process of applying for
9 assistance.¹⁰⁵ Instead, DTE Energy oversaw an increase in the net number of unrestored
10 customers while cutting enrollments in affordable payment plans by nearly two-thirds (as
11 shown in Figure 14 below).

¹⁰⁴ Ex. DAO-141, *FACT SHEET: Biden Administration Deploys American Rescue Plan Funds to Protect Americans from Rising Home Heating Costs; Calls on Utility Companies to Prevent Shut Offs This Winter*, WHITE HOUSE (Nov. 18, 2021), <https://perma.cc/F89D-3C2H>, at 1.

¹⁰⁵ *Id.* at 1–2.

Figure 13: DTE worsens energy insecurity after commitment to White House.¹⁰⁶



This example underscores the fact that DTE's commitments on paper to address the affordability crisis, whether to MPSC or the White House, can have little bearing on its subsequent actions.

Q: Has DTE opposed efforts to access data on shutoffs?

A: Yes. DTE Energy opposed data transparency in MPSC Case No. U-20757.¹⁰⁷ In public comments, DTE Energy noted that it had filed detailed comments on data reporting by zip code and census tract in MPSC Case No. U-20959 and argued that it would be duplicative to address such reporting in case U-20757.¹⁰⁸

¹⁰⁶ Ex. DAO-142. JS Workpaper 6 - disconnections (Shutoffs); Ex. DAO-143. JS Workpaper 7 - Affordable Protection Plan enrollments.

¹⁰⁷ DTE Comments on Interim Staff Report at 4.

¹⁰⁸ *Id.*

1 **Q: Is DTE taking any steps to address location-specific energy affordability struggles**
 2 **customers face?**

3 **A:** DTE does not appear to be doing so. In response to a discovery request, DTE Gas stated
 4 that it “does not track arrears by zip code, census tract, census block group, or circuit.”¹⁰⁹
 5 I have seen no information suggesting that DTE Electric tracks this data either, and I
 6 believe DTE Electric’s practices are most likely consistent with that of DTE Gas.
 7 Furthermore, DTE Electric has confirmed that it does not conduct any analysis to identify
 8 the affordability gap in developing its rate requests.¹¹⁰

9 For a service territory that covers half the state and serves 2 million residential
 10 customers, failing to identify pockets of severe and extreme energy burdens strikes me as
 11 negligent. It is common sense that the experiences of households in the Osborn
 12 neighborhood of Detroit are categorically different from those of a household in suburban
 13 Bloomfield Hills, Marquette or rural Sanilac County in Michigan’s Thumb.

14 Failing to conduct location-specific energy affordability analysis would suggest
 15 that the Company applies a one-size-fits-all approach to its energy assistance programs.
 16 Throughout my testimony, I have detailed the results and impacts that stem from the
 17 distanced, non-data-driven approach DTE takes to program design.

¹⁰⁹ Ex. DAO-144, U-21291 DTE’s Response to FLO’s First Discovery Request, FLODG-1.9, at 1.

¹¹⁰ Ex. DAO-145, DTE’s Response to DAAO’s First Discovery Request, DAAODE-1.36 at 1.

1 **Q: What is your critique of DTE’s approach to the Low-Income Self-Sufficiency Plan in**
 2 **this case and in general?**

3 **A:** The LSP is a two-year program that freezes payments that are past due, eliminates future
 4 late charges, and provides a monthly arrears credit.¹¹¹ From 2015–2022, excepting the
 5 2019–2020 COVID-19 program year, LSP enrolled an average of 32,533 customers but
 6 graduated just 3,816 annually.¹¹²

7 Conceptually, reducing arrearages over time is valuable, but it is still contingent
 8 upon an affordable bill and consistent bill payment by the customer. DTE has not
 9 demonstrated that the LSP terms result in an affordable energy burden (less than 6% of
 10 income). Evaluation of LSP and other assistance programs should be based first and
 11 foremost on affordability outcomes and their impact on shutoffs. If the goal of LSP is to
 12 ensure “sustained energy” access,¹¹³ the program performs poorly. DTE shuts off a very
 13 significant portion of customers despite the assistance provided. Below I reproduce an
 14 inverted version of Witness Spark’s Table 2 to show that an average of 16% of customers
 15 still suffer shutoffs.¹¹⁴ There is no trend of annual improvement. Even Sparks admits a
 16 structural design flaw in the program: “After discontinuing the support of LSP, customers
 17 often encounter difficulties in maintaining consistent monthly payments, leading to
 18 potential crises.”¹¹⁵ Perhaps with modifications LSP could perform better, but it is clearly
 19 not a long-term solution in its current form.

¹¹¹ Sparks Direct Testimony at 8, lines 8–20.

¹¹² Sparks Direct Testimony at 11 tbl.3, averages determined by calculating the total enrollees and graduates by the number of years in the table.

¹¹³ See *id.* at 8, lines 16-17 (“While participating in the plan, customers have the benefit of sustained energy.”).

¹¹⁴ *Id.* at 10 tbl.2.

¹¹⁵ *Id.* at 12.

Figure 14: LSP failure rate.¹¹⁶

LSP Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Avg
% Shutoff	20%	19%	8%	12%	9%	11%	33%	15%	18%	19%	16%

DTE claims that its “experience has shown that applying the low-income credit first towards a long-term program yields the highest self-sufficiency and assists in preventing missed payments.”¹¹⁷ Sparks elaborates that the LIA credit is only offered to LSP customers to strategically pair these two forms of assistance.¹¹⁸

The data, however, shows that no amount of program pairings mitigate the extremely high shutoff rates that DTE executes on LSP participants. In fact, the data in Figure 19 shows the highest shutoff rates for customers who are concurrently enrolled in LSP, LIA, RIA, and shutoff protection. It is not clear whether DTE is unaware of or poorly interprets its own data or chooses to construct a narrative that is not grounded in this reality.

¹¹⁶ This data was adapted from Sparks Direct Testimony at 10 tbl.2, LSP Success Rate 2013-2022.

¹¹⁷ Sparks Direct Testimony at 18, lines 11-13.

¹¹⁸ *Id.* at 18-19.

Figure 15: Shutoff rates for customers enrolled in multiple assistance programs.¹¹⁹

LSP Program Year Shut-off rate	2018			2019			2020			2021			2022		
	Combo	Elec only	Gas only	Combo	Elec only	Gas only	Combo	Elec only	Gas only	Combo	Elec only	Gas only	Combo	Elec only	Gas only
a. LSP & shutoff															
0-75	10%	11%	6%	11%	10%	5%	9%	10%	6%	12%	10%	7%	13%	11%	6%
76-110	8%	9%	4%	9%	6%	5%	7%	7%	9%	10%	8%	3%	10%	8%	2%
111-150	8%	7%	3%	9%	7%	2%	8%	9%	11%	10%	8%	8%	10%	10%	5%
b. LSP and LIA & shutoff															
0-75	10%	11%	5%	11%	10%	4%	9%	10%	6%	11%	9%	7%	13%	11%	6%
76-110	8%	9%	0%	9%	7%	5%	7%	7%	9%	10%	8%	2%	10%	8%	2%
111-150	8%	7%	2%	9%	7%	3%	8%	9%	12%	9%	7%	7%	10%	9%	4%
c. LSP and RIA & shutoff															
0-75	14%	0%	6%	12%	18%	4%	20%	21%	8%	22%	22%	14%	23%	21%	8%
76-110	13%	0%	6%	9%	13%	6%	17%	14%	14%	20%	16%	7%	17%	15%	4%
111-150	14%	0%	5%	10%	17%	2%	19%	17%	15%	20%	19%	11%	17%	20%	7%
d. LSP and HHC & shutoff															
0-75	10%	0%	4%	11%	0%	2%	8%	0%	4%	10%	0%	3%	12%	0%	3%
76-110	8%	0%	3%	10%	0%	0%	5%	0%	16%	7%	0%	0%	8%	25%	0%
111-150	7%		5%	9%		0%	6%	0%	15%	8%		6%	11%	0%	3%
e. LSP + HHC + LIA & shutoff															
0-75	10%	0%	9%	11%		1%	7%		4%	9%	0%	1%	11%		3%
76-110	8%		0%	10%		0%	5%		17%	7%	0%	0%	7%		0%
111-150	8%		11%	8%		0%	5%		17%	8%		6%	11%	0%	3%
f. LSP + HHC + RIA & shutoff															
0-75	11%		4%	12%	0%	3%	16%	0%	5%	19%	0%	7%	20%	0%	5%
76-110	9%		3%	10%	0%	0%	12%	0%	16%	15%	0%	0%	14%	25%	0%
111-150	8%		4%	10%		0%	13%	0%	22%	14%		13%	16%	0%	4%
g. LSP + LIA + RIA & shutoff															
0-75	14%	0%	7%	12%	19%	3%	20%	22%	8%	22%	23%	12%	22%	23%	8%
76-110	13%	0%	0%	9%	13%	6%	17%	12%	14%	20%	16%	7%	17%	16%	4%
111-150	14%	0%	0%	9%	17%	2%	18%	15%	16%	19%	20%	10%	16%	21%	6%
h. LSP + LIA + RIA + HHC & shutoff															
0-75	11%		13%	12%		2%	15%		5%	18%		2%	19%		4%
76-110	9%		0%	10%		0%	12%		17%	15%		0%	13%		0%
111-150	8%		0%	8%		0%	11%		25%	15%		17%	16%		4%

Q: What is your critique of DTE's approach to the Residential Income Assistance Credit (RIA) in this case and in general?

A: The RIA effectively waives the monthly customer charge of \$8.50. However, DTE's own data shows that the majority of RIA enrollees still face high rates of and are unable to pay their bills on time. In 2023, late fees per low-income customer averaged \$41.16, which would offset about five months of the RIA Credit value.¹²⁰

Figure 20. RIA Credit Performance¹²¹

RIA CREDIT	Late Payment Percentage	Shutoff Notice Percentage	Shutoff Percentage
2020	N/A	N/A	N/A
2021	68.95	76.77	38.27
2022	78.83	86.29	46.26
2023	77.51	84.71	41.75

¹¹⁹ Exhibit A-32 Schedule W1.

¹²⁰ See Ex. DAO-139, JS Workpaper 5 - Customer Late Fees (adapted from data provided by Witness Sparks in Discovery Response DAAODE-1.1 - 1.5). 5 months of RIA credit x \$8.50 = \$42.50; see also Ex. DAO-140. Attachment to DTE's Response to DAAO's First Discovery Request, DAAODE 1.1-1.5.

¹²¹ Ex. DAO-146, DTE's Response to DAAO's First Discovery Request, DAAODE-1.28.

1 Importantly, DTE applies the practice of auto-enrollment to provide the RIA credit to
2 customers who receive the Home Heating Credit (HHC) or State Emergency Relief (SER)
3 provided by the State of Michigan.¹²² DTE has existing capacity in its system to perform
4 auto-enrollments but chooses to use this capacity sparingly.

5
6 **Q: What is your critique of DTE’s approach to the Payment Stability Plan (PSP) Pilot in**
7 **this case and in general?**

8 **A: In 2022 and 2023, DTE adopted the PSP pilot, a Percentage of Income Payment Plan**
9 **(PIPP), a step in the right direction.**¹²³

10 However, the Company needs to provide more assistance to more people more
11 quickly through an improved PIPP. Presently, the Company used an unaffordable 10%
12 energy burden as the target for combination customers (67% above the affordability
13 threshold of a 6% burden) and 6% electric only burden (2x the affordability threshold of a
14 3% electric-only burden); these burdens need to be lowered to more like 6% in total or 3%
15 for electric only.¹²⁴ Furthermore, the Company neither has concrete plans to expand the
16 pilot to a certain number of customers nor does it have any firm timelines for when it will
17 seek approval of an amended or replacement program.¹²⁵ Instead, the Company should
18 seek an expanded number of participants promptly.

¹²² Sparks Direct at 15, lines 13-16.

¹²³ Sparks Direct at 13, lines 16-17.

¹²⁴ *Id.* at 13.

¹²⁵ *Id.* at 14.

1 **Q: Is DTE able to identify a wider number of customers who are eligible for its energy**
 2 **assistance programs?**

3 **A:** Yes. Currently DTE classifies just 8% of its residential customers as LI¹²⁶ (earning less
 4 than 200% of FPL), more than 3.5 times less than the 29% of Michigan residents according
 5 to the 2022 Census data.¹²⁷ This indicates that 75% of income-eligible households are not
 6 currently participating in DTE's assistance programs.

7 DTE is at least in possession of the number of customers who receive bill payment
 8 assistance from LIHEAP and other human service agency programs.¹²⁸ At a minimum, that
 9 information should be sufficient to help determine most customers eligible for the Low-
 10 Income Assistance (LIA) credit.

11 If DTE is not reviewing the number of customers eligible for its programs, it should.
 12 DTE needs to demonstrate much better awareness of its customer base demographics.
 13 Income and age data from the U.S. Census is readily available and easily compiled by
 14 census tract. DTE should at least understand the approximate number of customers who
 15 are eligible for these beneficial assistance programs so that it can improve its marketing
 16 and increase enrollments. If DTE had any intention to reduce customer arrears, shutoffs, or

¹²⁶ See Ex. DAO-139, JS Workpaper 5 - Customer Late Fees (adapted from data provided by Witness Sparks in Discovery Response DAAODE-1.1 - 1.5); see also Ex. DAO-140. Attachment to DTE's Response to DAAO's First Discovery Request, DAAODE 1.1-1.5.

¹²⁷ Ex. DAO-147, Kaiser Family Foundation, Population Up to 200% FPL (American Community Survey) (last viewed July 9, 2024), <https://www.kff.org/other/state-indicator/population-up-to-200-fpl>.

¹²⁸ See Sparks Direct at 4, lines 5-10 ("For non-low-income customers, we provide energy assistance through a 25% match of the Low-Income Home Energy Assistance Program (LIHEAP) Support program administered by the Michigan Department of Health and Human Services (MDHHS) as well as Energy Waste Reduction (EWR) services.") This indicates DTE knows which customers receive LIHEAP through collaboration with MI Department of Health and Human Services (MDHHS).

1 to graduate people from LSP, identifying customers who could benefit seems like low-
 2 hanging fruit and an obvious starting point.

3
 4 **Q: Could you provide examples of what a systematic approach to energy affordability**
 5 **and security could look like for DTE?**

6 **A:** Yes. As context, DTE's current baseline is 717,121 shutoffs between 2020 and 2023
 7 (663,878 of which were from DTE Electric), with little change in the overall trend since
 8 ramping up shutoffs in mid-2020.¹²⁹ As discussed above, its energy assistance programs
 9 do not currently ensure uninterrupted access to energy.

10 Thus, a systemic approach to reducing these shutoffs could include:

- 11 1. Enacting an immediate moratorium on all shutoffs not related to theft or unauthorized
 12 use. The MPSC does not require DTE to initiate shutoffs. DTE has the existing
 13 authority to offer alternatives to customers, report any revenue reductions as
 14 uncollectable, and propose alternative approaches to the MPSC.
- 15 2. Defining measures of success, namely a reduction in shutoffs and a reduction in the
 16 number of customers with energy burdens above 6%. The Company should prioritize
 17 eliminating the highest energy burdens (i.e. above 20%) and then continuing to lower
 18 the maximum burdens among DTE customers until the universal 6% standard is
 19 achieved. Defining measures of success would also identify data needed to assess
 20 whether there are disparate outcomes by race, income, location, or participation in

¹²⁹ See Ex. DAO-142. Workpaper 6 contains all PDF reports provided by DTE Electric between 2020 and 2023, converted to .csv format. These reports include monthly shutoff totals (actual shutoffs, not net unrestored shutoffs) separately for gas and electric. The sum of column B yields 717,121 shutoffs during this period. Electric shutoffs were determined using the SUMIF function.

assistance and EWR programs that merit additional investments, engagement strategies, etc.

3. Proposing a comprehensive affordability strategy. The Company should use its position to accelerate the development of affordability rate structures, such as PIPPs and Low-Income Discount Credits that have been proven effective in other states such as Illinois.¹³⁰

4. Creating a unified affordability program that reduces customer arrearages and enables customers to afford their bills, ideally a PIPP that ensures no customer spends more than 3% of income on electricity and no more than 6% of income on energy in total. Or, in the absence of a unified program or until one can be implemented, expanding existing bill assistance programs significantly and increasing the marketing of these programs substantially.

5. Creating systems that prioritize outreach, enrollment, and program evaluations to maximize the effectiveness of the above programs. Evaluation efforts should assess disparities in who participates and differences in outcomes by specific vulnerable populations and lead to the development of approaches to address those differences.

Q: Is this a reasonable expectation that DTE develops systematic approaches to affordability?

A: I believe it is. Witness Sparks acknowledges that reducing low-income customers' struggles to pay their bills is in the self-interest of the Company and is mutually

¹³⁰ See Ex. DAO-148, Excerpt from Ill. Com. Comm'n No. 23-0067, Order (Nov. 16, 2023), at 2–5.

beneficial.¹³¹ DTE has extensive strategic planning expertise among its leadership. The Company uses data driven approaches to an array of business operations, EWR, and integrated resource planning. Providing affordable and reliable service to low-income customers is a core responsibility of DTE. This responsibility can only be fulfilled by developing alternatives to the current assistance programs. The record is clear that the current programs are failing too many customers, leaving them in financial crisis, compounding late fees, interest, and deposits, and subjecting them to the frequent threat and experience of shutoffs. The Company can do better, and the Commission should make it do so.

V. ASSESSING THE MPSC’S RESPONSE TO ENERGY INSECURITY, SHUTOFFS, AND THE AFFORDABILITY CRISIS

Q: Please summarize this section of your testimony.

A: In this Part, I consider the MPSC’s response to affordability challenges and shutoffs, what it has and has not done to regulate DTE and ensure energy is accessible to all customers.

Q: Has the MPSC been sufficiently prioritizing affordability?

A: I do not believe so. Like dozens of other PUCs, the MPSC’s mandate requires that it judge utilities’ requests according to multiple criteria. These criteria include safety, reliability, affordability, and “just and reasonable” rates for both the customer and the utility. Understandably, there can be no compromises around safety, which is the bedrock of a

¹³¹ Sparks Direct Testimony at 6, lines 17–18. (“This integrated approach can yield sustainable solutions that benefit both the Company and its low-income customers.”)

1 centralized energy transmission and distribution system, and, generally, safety is well-
2 regulated.

3 Unfortunately, energy affordability has long been considered more of a luxury than
4 an imperative. There is widespread evidence from both Commission rulings and DTE
5 energy assistance programs that the Commission does not view ensuring true affordability
6 as critical. In the Commission's COVID-19 order in MPSC Case No. U-20757, for
7 instance, despite affirming its authority to take swift actions to protect customers, the
8 Commission's shutoff moratorium was voluntary.¹³² DTE complied for just over three
9 months and resumed shutoffs shortly after.¹³³ Commissions in other states maintained
10 shutoff protections for significantly longer.¹³⁴

11
12 **Q: Please summarize the MPSC's recent efforts to address shutoffs and unaffordability.**

13 **A:** Since the start of COVID-19, the MPSC has tasked three different bodies (Energy
14 Affordability and Accessibility Collaborative, Energy Waste Reduction Low-Income
15 Workgroup, and the Low-Income Energy Policy Board) with studying the issues and
16 proposing solutions.¹³⁵ These bodies are led by MPSC staff and are comprised primarily
17 of energy affordability advocates and practitioners as well as utility representatives.

¹³² Apr. 15, 2020 U-20757 Order at 9–10.

¹³³ See Ex. DAO-136 at 1.

¹³⁴ See Ex. DAO-149, NAT'L ENERGY ASSISTANCE DIRECTORS' ASS'N, SUMMARY OF STATE UTILITY SHUT-OFF MORATORIUMS (2021), at 1–2.

¹³⁵ See Ex. DAO-105, at 1–3; Ex. DAO-150, *Low-Income Energy Policy Board*, MICH. PUB. SERV. COMM'N (last accessed May 6, 2024), <https://www.michigan.gov/mpsc/commission/workgroups/low-income-energy-policy-board>, at 2.

1 The Commission set timelines for the EAAC, in particular, to report on its work.¹³⁶

2 The EAAC submitted interim reports on its work in December 2021¹³⁷ and March 2023.¹³⁸

3 Stakeholders, including regulated utilities, were given time to respond with comments.¹³⁹

4 The Commission responded to the Staff interim reports and stakeholder comments
5 in proceeding orders, leading to the efforts I describe below.
6

7 **Q: What progress was made toward energy security through these proceedings?**

8 **A:** Some of the work completed by the EAAC was important and constructive. For instance,
9 the EAAC initiated monthly reporting requirements for shutoffs notices, arrearages,
10 reconnections, and the net number of customers without service.¹⁴⁰ Another positive
11 outcome was the Commission's adoption of a definition of energy affordability. The
12 Commission defined energy affordability as "[t]he extent to which a household has the
13 resources to meet their home energy needs for heating, cooling and other uses in a healthy,
14 sustainable and energy efficient manner without compromising a household's ability to
15 meet other basic needs."¹⁴¹
16

¹³⁶ See *In re Response to COVID-19*, MPSC Case No. U-20757, Order (Dec. 21, 2023) [hereinafter Dec. 21, 2023 U-20757 Order], at 44; *In re Response to COVID-19*, MPSC Case No. U-20757, Order (Feb. 18, 2021) [hereinafter Feb. 18, 2021 U-20757 Order], at 16; *In re Response to COVID-19*, MPSC Case No. U-20757, Order (Feb. 10, 2022), at 14–15.

¹³⁷ See generally *In re Response to COVID-19*, U-20757, EEAC Interim Report (Dec. 17, 2021)(available at <https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y000001VqhIAAS>).

¹³⁸ See generally *In re Response to COVID-19*, U-20757, EEAC Interim Report (Mar. 16, 2023) (available at <https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y000007DkxqAAC>).

¹³⁹ See, e.g., DTE Comments on Interim Status Report.

¹⁴⁰ Feb. 18, 2021 U-20757 Order at 21.

¹⁴¹ Dec. 21, 2023 U-20757 Order at 36.

1 **Q: From these efforts, did the EAAC make measurable progress on unaffordable energy**
2 **burdens or shutoffs?**

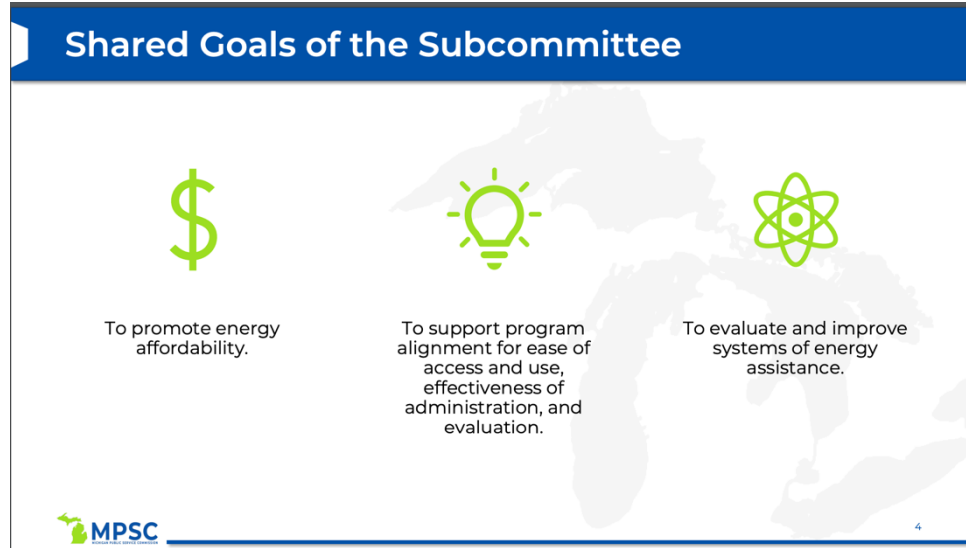
3 **A:** No. The EEAC has failed to make measurable progress on unaffordability and shutoffs.

4 First, the EAAC has focused extensively on process improvements, coordination,
5 definitions, and outputs such as program enrollments, rather than outcomes like measurable
6 reductions in energy burdens. It has not suggested quantitative approaches to measuring
7 energy unaffordability or insecurity, and the Commission has not ordered it to do so. I have
8 reviewed the content of the EAAC website, including reports, meeting notes, and
9 presentations. It strikes me that the EAAC serves as a body that has worked primarily to
10 establish definitions and principles. It has not explicitly communicated a priority to
11 minimize or eliminate shutoffs. The Affordability, Alignment and Accessibility (AAA)
12 subcommittee of the EEAC, for instance, largely does not discuss shutoffs, as I explain
13 further below.

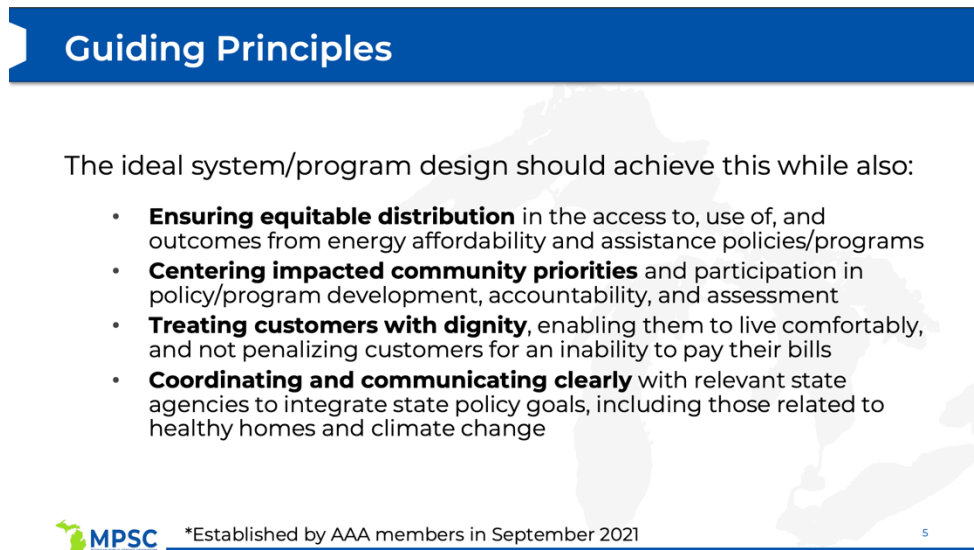
14
15 **Q: How would you characterize the EAAC’s concern for preventing shutoffs?**

16 **A:** Serious discussion of how to reduce or prevent shutoffs and ensure households’ continuous
17 access to heat and electricity is largely absent from the materials of the EAAC. The goals
18 and guiding principles of EAAC’s AAA subcommittee, illustrated in Figure 22 and Figure
19 23 below, do reference items such as “promot[ing] energy affordability” and “[t]reating
20 customers with dignity, enabling them to live comfortably, and not penalizing customers
21 for an inability to pay their bills.” However, it appears that the AAA Subcommittee has not
22 undertaken any serious discussion of how to reduce or prevent shutoffs—as with the EAAC
23 more broadly.

1 *Figure 16: “Shared Goals” of the AAA subcommittee.¹⁴²*



2
3 *Figure 17: “Guiding Principles” of the AAA subcommittee.¹⁴³*



¹⁴² See Ex. DAO-152, AFFORDABILITY, ALIGNMENT, AND ASSISTANCE SUBCOMMITTEE, MICH. PUB. SERV. COMM’N, PRESENTATION (Oct. 3, 2023), at 4.

¹⁴³ *Id.* at 5.

1 After reviewing meeting minutes, the detailed AAA subcommittee goals,¹⁴⁴ and the
 2 reports to Staff, it is clear that minimizing shutoffs and achieving an affordable (6% or less)
 3 energy burden have not been EAAC priorities and have garnered a fraction of the attention
 4 given to other issues and priorities. The AAA subcommittee was tasked with “analyzing
 5 collections processes and disconnections.”¹⁴⁵ Actually working on this goal, however, was
 6 not a priority for any of the subcommittee members, as indicated by survey results from its
 7 November 10, 2022, meeting.¹⁴⁶ This may be because the subcommittee, like the EAAC
 8 as a whole, in my understanding, is comprised primarily of MPSC staff and professional
 9 staff at utilities and other organizations instead of residents with lived experience.
 10 Furthermore, as shown in Figure 24 below, the AAA subcommittee’s kickoff did not even
 11 list addressing shutoffs—by far one of the greatest threats to life and generational
 12 poverty—as an option for members to prioritize. After identifying shutoff analysis as a
 13 potential task, the topic is almost entirely absent from future meeting presentations. Instead,
 14 the committee is focused on issues like the “customer journey” to secure assistance, a
 15 landscape analysis of programs, and internal structure, charge, and processes.¹⁴⁷ Each of
 16 these has value, but they are not oriented toward reducing the number of households with
 17 high energy burdens. Not surprisingly, the evidence presented by Staff and the responses
 18 from stakeholders have not seriously considered pathways to universal affordability and
 19 reducing shutoffs to a mechanism of last resort.

¹⁴⁴ See generally Ex. DAO-151, AFFORDABILITY, ALIGNMENT, AND ACCESSIBILITY SUBCOMMITTEE GOALS (2022).

¹⁴⁵ Ex. DAO-153, AFFORDABILITY, ALIGNMENT, AND ACCESSIBILITY SUBCOMMITTEE KICK-OFF (2021), at 4.

¹⁴⁶ Ex. DAO-154, AFFORDABILITY, ALIGNMENT, AND ACCESSIBILITY SUBCOMMITTEE 11-10-2022 MEETING (2022), at 7.

¹⁴⁷ *Id.* at 4.

Figure 18: No option for AAA subcommittee members to prioritize shutoffs.¹⁴⁸

Survey Results: Priority List

Rank the following areas of focus for prioritization in the December report:

Answered: 28 Skipped: 0



Q: What views has the Commission expressed about the urgency of what you present as a crisis of energy insecurity and unaffordability, which disproportionately harms BIPOC households?

A: Through its actions, the Commission has expressed that it believes that the energy insecurity and unaffordability crisis is not urgent. In its December 21, 2023 Order in MPSC Case No. U-20757, for instance, “[t]he Commission . . . agree[d] with the Staff that it is not appropriate to prematurely approve permanent PIPP programs.”¹⁴⁹ Instead, in the same Order, the Commission committed to “[i]mplement[ing] a proceeding in 2024 to continue and expand its review of these pressing issues,” citing Public Act 231 (2023) as an impetus

¹⁴⁸ Ex. DAO-155, AFFORDABILITY, ALIGNMENT, AND ACCESSIBILITY SUBCOMMITTEE 9-9-2021 MEETING (2021), at 9.

¹⁴⁹ U-20757 Dec. 21, 2023 Order at 5.

1 behind this commitment.¹⁵⁰ This language suggests that the Commission is not treating the
 2 crisis of energy insecurity and unaffordability with sufficient urgency, resulting in delays
 3 that cause real harm to people and communities.

4
 5 **Q: How has the MPSC addressed the data gaps you are facing in your data analysis?**

6 **A:** To its credit, MPSC staff advised additional reporting by census tract and zip code, a
 7 recommendation approved in the Commission's December 21, 2023, Order, despite
 8 protests by DTE Electric that such reporting would be burdensome.¹⁵¹ A timeline for such
 9 reporting, however, was not included in the Order.

10 I will note that the MPSC also removed the initial monthly reporting requirements
 11 in the Order described above, shifting to only quarterly reporting of shutoffs and collection
 12 metrics beginning in December 2024.¹⁵² Quarterly reports are not sufficient, in my opinion,
 13 to observe trends such as spikes in shutoffs when other assistance programs run out of
 14 funds or during periods of extreme weather, such as heat waves. Monthly reporting by
 15 census tract, as IOUs in Illinois do,¹⁵³ is a national best practice

¹⁵⁰ *Id.* at 6.

¹⁵¹ *Id.* at 25, 28.

¹⁵² *Id.* at 22.

¹⁵³ See generally Ex. DAO-156, *Credits, Collections, and Arrearages Reports Monthly Dashboard*, ILL. COM. COMM'N (last accessed May 6, 2024), <https://www.icc.illinois.gov/industry-reports/credit-collections-and-arrearages-reports/monthly-dashboard>. This dashboard includes a drop-down menu to access data shared monthly.

1 **Q: Do you agree with the Commission’s approach and timelines for addressing the**
2 **current crisis?**

3 **A:** No. Unfortunately, the Commission has not moved quickly with actions that can provide
4 immediate relief for low-income customers. Taking a patient, multiyear approach to
5 creating a robust, state-specific PIPP would be reasonable *if* sufficient safeguards were
6 available in the interim. But they are not. This means that thousands of customers who face
7 severe and extreme energy burdens will forego other basic necessities, keep their homes at
8 unsafe temperatures to conserve energy, and face the threat and the actuality of shutoffs.

9 I would support a longer PIPP development process if the Commission
10 implemented an interim solution, such as a moratorium on shutoffs, an automatic
11 expansion of LIA and RIA to all eligible customers, and an expansion of an approach that
12 combines LSP with other efficiency and assistance programs for the most energy-burdened
13 households.

14 As of now, the EAAC and LIEPB, among other bodies that have been tasked with
15 addressing energy affordability concerns over the years, have not generated outcomes that
16 result in measurable reductions for customers with energy burdens above 6%. There may
17 be good reasons for limited progress, such as the capacity of volunteer boards, the
18 composition and expertise of its members, the desire to be inclusive, questions about
19 authority and timelines, the competing interests introduced by utility representatives, or
20 squeamishness to confront utilities about unforgiving shutoff and collections practices. But
21 regardless of the reasons, these boards, which have now been working for more than two
22 years, have produced only modest impacts. Regardless, so far, it is the Commission’s
23 position to continue to defer to these groups—that the EAAC and LIEPB should hold the

1 reins to create solutions for what could easily amount to an additional two years. That does
 2 not seem to reflect an honest assessment of the current situation. What has been the fate of
 3 customers who depend on utility regulation to have any hope of staving off the impacts of
 4 shutoffs and energy poverty?

5 In the absence of immediate action, waiting a significant amount of additional time
 6 before rolling out a PIPP plan is to know that the harms of energy poverty will continue to
 7 be allowed. Importantly, the Commission has already recognized in the U-20757 Order
 8 that rulings in contested dockets like rate cases are superior paths to assigning the task of
 9 identifying and designing solutions to workgroups like the EAAC.¹⁵⁴

10
 11 **Q: How would you recommend the Commission consider this evidence about the limited**
 12 **effectiveness of the EAAC to measurably reduce energy burdens or shutoffs?**

13 **A:** I am not the first to make the point. The Michigan Energy Efficiency for All Network
 14 (MEEFA) made it in briefing, and the Commission supported this in its December 21,
 15 2023, Order.¹⁵⁵ I am reiterating the shortcomings of the EAAC in the hopes that the
 16 Commission does not merely leave the affordability outcomes to another proceeding. The
 17 Commission has an opportunity and, I believe, a responsibility to consider these elements
 18 of affordability as part of the current rate increase proposed by DTE Electric and to
 19 implement interim solutions that provide relief while potential additional long-term
 20 solutions are developed through committee work and other dockets.

¹⁵⁴ Dec. 21, 2023 U-20757 Order at 6–7 (“MEEFA states that ‘the Commission should also rule whenever possible on issues in contested dockets rather than referring them to workgroups’ . . . The Commission agrees with this recommendation.”).

¹⁵⁵ *Id.*

1 **VI. RECOMMENDATIONS TO THE MPSC**

2 **Q: Please summarize this section of your testimony.**

3 **A:** The MPSC has the authority to provide immediate relief to the most vulnerable customers
 4 and those with the lowest incomes. The MPSC has an existing blueprint for taking action
 5 to address critical customer concerns through its series of orders in the COVID-19 docket
 6 (MPSC Case No. U-20757). These actions would align closely with the Commission's
 7 mandate to ensure just and reasonable rates. Furthermore, given DAAO's concerns about
 8 the potential for racial discrimination and inconsistent customer treatment, suspending
 9 shutoffs would also allow the MPSC to further investigate these concerns and provide
 10 customer protections against potential statutory violations by DTE.

11 I recommend the Commission do everything in its power to mitigate the ongoing
 12 crises of unaffordability and shutoffs, the harms that result from these crises on customers'
 13 health and well-being, and the disproportionate impacts to BIPOC households and
 14 residents of Wayne County—Detroit, Hamtramck, and Highland Park specifically. These
 15 recommendations include:

- 16 1. Ordering an immediate pause on shutoffs until the Commission receives and analyzes
 17 census tract and zip code data from DTE for the metrics currently included in its
 18 quarterly reports;
- 19 2. Ordering an extended moratorium on shutoffs if disparities in customer treatment by
 20 race, income, location, or any other demographic variable are identified with census
 21 tract or zip code data;

3. Setting a limit on the maximum energy burden of 6% of income for all customers, and ordering DTE, Staff, the EAAC, and interested stakeholders to propose measurable pathways to achieve this goal;
4. Requiring DTE to integrate best practices regarding Percentage of Income Payment Plans (PIPPs) and similarly structured programs and accelerate the transition of its recent PSP pilot to a full program scoped to meet customer need; and
5. Improving data collection and reporting formats by requiring continued monthly reporting of shutoff and collections data, as opposed to quarterly reporting, and by including census tract data for all current metrics.

Q: What are your recommendations to the MPSC regarding shutoffs?

A: First, I recommend that the MPSC initiate an immediate pause on shutoffs as it collects further information through DTE's data reports and docket U-21570 initiated in response to PA 231.¹⁵⁶ Second, I recommend that the MPSC adopt an extended moratorium on shutoffs if the analysis of this forthcoming data identifies entrenched inequities, insufficient affordability programs, or a sustained risk to public health.

¹⁵⁶ MICH. PUB. ACTS 231§ 6aa: "(2) Not later than June 1, 2024, the commission shall open a proceeding to consider options to expand opportunities for public engagement in its decision-making processes and procedures with respect to all of the following:

- (a) The accessibility and transparency of the commission's decision-making processes.
 - (b) Opportunities for participation in the commission's decision-making processes, especially by low-income residential customers, residential customers that experience high energy burdens, and individuals and communities impacted by commission decisions.
 - (c) The responsiveness of commission decisions to community needs and priorities.
- (3) Not later than June 1, 2024, the commission shall open a proceeding to investigate opportunities for improving the process by which it reviews applications filed under section 6a."

1 **Q: What is your rationale for an immediate pause on shutoffs?**

2 **A:** I recommend MPSC issue a moratorium on shutoffs, with associated customer protections
3 against late fees, additional deposits, and reconnection fees.

4 I have identified numerous distributive inequities throughout my testimony that
5 indicate disparate outcomes for customers on the basis of race and income. In other words,
6 DTE is causing immediate and disproportionate harm to BIPOC and LMI households. The
7 public lacks sufficient data to further identify similar disparities that may exist on the basis
8 of income. The MPSC has an obligation to ensure fair treatment by DTE for all customers.
9 The only way I see to ensure fair treatment and guard against the worst impacts of severe
10 and extreme energy burdens in the short term is to institute a pause until conclusions from
11 further analysis, both quantitative and qualitative, can be reached.

12 This recommendation follows the model established by the California Public
13 Utilities Commission (CPUC). The CPUC concluded:

14 The Commission has implemented policies and procedures to reduce gas
15 and electric utility service disconnections; however, the rate of customer
16 disconnections continues to rise. Accordingly, the instant rulemaking has
17 been instituted with the goal of developing policies and rules to reduce the
18 statewide level of gas and electric service disconnections for nonpayment
19 by residential customers. This decision adopts interim rules to take effect
20 immediately on an emergency basis to provide rapid relief while we
21 consider longer term solutions.¹⁵⁷

22 Furthermore, the CPUC found “PG&E and SCE failed to show in opening
23 comments that the interim rules will result in any incremental costs to them[.]”¹⁵⁸
24 suggesting that these rules to reduce shutoffs could have little impact on utility companies
25 while providing benefits to LMI customers.

¹⁵⁷ Ex. DAO-157, ACEVES GUZMAN, DECISION ADOPTING INTERIM RULES TO REDUCE RESIDENTIAL
CUSTOMER DISCONNECTIONS FOR CALIFORNIA-JURISDICTIONAL ENERGY UTILITIES (2018), at 3.

¹⁵⁸ *Id.* at 10.

1 **Q: How and when would the second phase of your recommendations—an extended**
 2 **moratorium on shutoffs—be implemented?**

3 **A:** I believe no customers should be deprived of access to energy, a basic human need, on the
 4 basis of race, income, where they live, or any other demographic variable over which they
 5 have little or no control. Simply being too poor should not sentence a household to the
 6 cycle of figuring out which basic needs to forego, letting their homes reach temperatures
 7 that are dangerously cool or hot to conserve energy, or paying hefty late fees, interest, and
 8 deposits to reconnect for an uncertain amount of time before the next cycle begins.

9 There is enough money in the customer base so that no one faces an energy burden
 10 above 6% or a shutoff. Achieving this robust level of distributive and restorative equity
 11 will require exploring all options to reduce customer bills, maximize assistance, leverage
 12 new sources to enhance energy efficiency and beneficial electrification, restructuring
 13 regressive customer charges, and ensuring that all customer classes pay their fair share to
 14 ensure universal access to affordable energy.

15 The CPUC is a good model. Following its docket to investigate and analyze the
 16 issue deeply and to allow robust stakeholder participation, the CPUC made a number of its
 17 interim rules permanent. Notably, the CPUC determined “it is reasonable to impose
 18 restrictions prohibiting disconnections of residential utility service until the utility has
 19 offered to enroll the residential customer all applicable benefit programs administered by
 20 the utility.”¹⁵⁹

¹⁵⁹ Ex. DAO-158, Phase I Decision Adopting Rules and Policy Changes to Reduce Residential Customer Disconnections for the Larger California-jurisdictional Energy Utilities, Decision 20-06-003 (June 11, 2020), at 1.

1 An extended moratorium need not result in increasing customer debt or a financial
 2 burden to other customers or the Company. DTE has assistance programs in place that are
 3 directionally sound—if EWR-LI programs and affordability offerings, especially the PSP
 4 pilot, were calibrated to achieve a maximum 6% energy burden, households would make
 5 consistent payments on a bill they could reasonably afford. Expanding these programs
 6 would have very modest costs to other ratepayers, who, when above median income, are
 7 more likely to have sufficient means to return a share of the benefits of energy efficiency
 8 programs they have received over time. There would be savings to the rate base from
 9 reduced uncollectibles and the large collections infrastructure DTE operates (the cost of
 10 which is unknown). A moratorium on shutoffs would motivate improvements and
 11 efficiency within the current patchwork of low-income credits and programs.

12 It is in the interests of all parties to work toward agreement on the most robust
 13 shutoff protections as early as possible. The alternative, to knowingly allow shutoffs from
 14 the basic necessity of energy which we all use every day to survive, is cruel. In assessing
 15 why Americans have collectively failed to eliminate extensive poverty despite our
 16 overflowing collective wealth, scholar, MacArthur genius, Pulitzer Prize-winning author
 17 of *Evicted* Matthew Desmond suggests:

18 We like it [poverty]. It's the rudest explanation, I know, which is probably why
 19 we cloak it behind all sorts of justifications and quick evasions....If this is our
 20 design, our social contract, then we should at least own up to it. We should at
 21 least stand up and profess, *Yes, this is the kind of nation we want.* What we cannot
 22 do is look the American poor in the face and say, *We'd love to help you, but we*
 23 *just afford to*, because that is a lie.¹⁶⁰

¹⁶⁰ DAO-159. MATTHEW DESMOND, POVERTY, BY AMERICA 101–02 (2023).

1 **Q: What precedents are there for shutoff moratoria?**

2 **A:** The MPSC has direct experience when it turned to a shutoff moratorium, albeit voluntary,
 3 to protect public health during the start of the pandemic. The Commission laid out the
 4 rationale for that moratorium in its April 2020 Order in MPSC Case No. U-20757.¹⁶¹ DTE
 5 abided by the voluntary request for about three months.¹⁶² Furthermore, forty states enacted
 6 some form of a moratorium during the COVID-19 pandemic, and the majority of states
 7 continued their moratoria a year or longer, well into 2021.¹⁶³ The Los Angeles Department
 8 of Water and Power, the largest municipal utility in the country, voted unanimously in
 9 November 2022 to approve a permanent moratorium on shutoffs.¹⁶⁴

10 The MPSC has other elements of a moratorium already in place, such as winter
 11 protection for seniors and low-income customers on a budget billing plan and for customers
 12 with documented medical conditions.¹⁶⁵

13
 14 **Q: Could you recommend ways that DTE could use whatever resources it has to more
 15 effectively target households in the most burdened communities?**

16 **A:** Yes. Below is an example of how, using census tract data, DTE could propose an equitable
 17 distribution of benefits based on the percentiles for energy burden, federal indicators of

¹⁶¹ Apr. 15, 2020 U-20757 Order.

¹⁶² Ex. DAO-136 at 1.

¹⁶³ Ex. DAO-160, *Winter and Covid-19 Shut-Off Moratoriums*, NAT'L ASS'N OF ENERGY ASSISTANCE DIRECTORS (Mar. 15, 2021), <https://neada.org/wintercovid19moratoriums/>.

¹⁶⁴ Ex. DAO-161, L.A. DEP'T OF WATER & POWER, MOTION TO DISCONTINUE SHUT-OFFS AS AN ACCOUNT MANAGEMENT COLLECTION TOOL FOR CUSTOMERS ENROLLED IN LADWP EZ-SAVE AND LIFELINE DISCOUNT PROGRAMS (2022), at 1.

¹⁶⁵ See MCL § 460.9r; see also Ex. DAO-162, SANYA CARLEY AND DAVID KONISKY, UTILITY DISCONNECTIONS DASHBOARD (2023), at 1.

disadvantaged census tracts used for Justice40,¹⁶⁶ and the percentage of households below either 100% or 200% of FPL. In Figure 25 below, I have provided a matrix providing an example of how benefits could be maximized to protect vulnerable households such that the greatest share goes to the most vulnerable customers. In this example, I segment census tract vulnerability based on percentile buckets in these four categories (e.g., the second to fifth percentile is one bucket), and suggest specific program allotments that could align with vulnerability levels. I present this example to show that a robust, quantitative approach to achieving distributive equity is feasible and straightforward.

Figure 19: Sample approach to equitable distribution of program benefits based on census tract vulnerabilities.

Census Tract Variable	Top 2%	Benefits	2-5%	Benefits	5-10%	Benefits	10-25%	Benefits
Energy burden	21.5%	Automatic enrollment for the entire census tract	15.4%	Opt out based on MDHHS enrollments; reserve 15% of remaining slots (5x)	12.7%	Enrollment qualifies for 3 years; reserve 15% of remaining slots (3x)	8.2%	Priority outreach; reserve 30% remaining slots (2x)
# CEJST thresholds	10.2		10.2		8.4		3.8	
HH below 200% FPL	61.1%		60.8%		52.8%		43.1%	
HH below 100% FPL	39.5%		35.6%		28.6%		20.3%	

Q: Your third recommendation is to limit energy bills to 6% of income. How would this work?

A: Requiring a comprehensive affordability program, such as a PIPP, is an essential complement to a pause or moratorium on shutoffs. Indeed, the Commission has already

¹⁶⁶ Justice40 is an initiative created by President Joe Biden’s Executive Order 14008 that requires federal agencies to ensure that 40% of the benefits of covered programs be distributed to “disadvantaged” census tracts. The White House’s Council on Environmental Quality (CEQ) created the Climate and Economic Justice Screening Tool (CEJST) to define disadvantaged tracts. CEJST establishes thresholds for twenty-nine indicators; exceeding any threshold qualifies a tract as disadvantaged. The number of thresholds exceeded is a good measure of a community’s exposure to environmental injustices. For more information, see <https://www.whitehouse.gov/environmentaljustice/justice40/> (Justice 40) and <https://screeningtool.geoplatform.gov/en/methodology#3/33.47/-97.5>.

1 approved a number of pilot programs that limit payments to a percent of income. For
 2 example, in 2022, the MPSC approved a pilot by Consumers Energy that sets a fixed
 3 monthly payment for gas and electricity that is set to 6% of income.¹⁶⁷ The MPSC has also
 4 approved DTE's PSP pilot, but unfortunately, as discussed above, this program sets the
 5 combined gas and electric burden at 10% of income, which is not affordable.

6 Most importantly, the PIPP must be extended to all customers with energy burdens
 7 that exceed 6% of income and any DTE Electric-only customers with electric burdens
 8 above 3% of income. These energy burdens are most concentrated among households with
 9 incomes below 60% of AMI,¹⁶⁸ but a number of households with incomes between 60%
 10 and 100% AMI also have unaffordable energy burdens. DTE could include a billing insert
 11 that indicates income eligibility for each customer and the actions required to enroll in the
 12 PIPP based on the last twelve billing months.

13
 14 **Q: Is there precedent for a PUC to establish an affordability mechanism as part of a**
 15 **utility rate case?**

16 **A:** Yes. The Illinois Commerce Commission reviewed a series of proposals for a low-income
 17 discount credit (LIDC) in five gas rate cases in 2023. Ultimately, the Commission adopted
 18 a five-tiered LIDC that applies to the entire customer bill.¹⁶⁹ The tiers were calibrated so
 19 that every household has an affordable gas energy burden of not more than 3% of
 20 income.¹⁷⁰ This new structure that was created by an ICC order was not contingent upon

¹⁶⁷ *In re Consumers Energy*, MPSC Case No. U-21021, Order (Feb. 10, 2022).

¹⁶⁸ *See supra* fig.8.

¹⁶⁹ *See* Ex. DAO-148 at 4.

¹⁷⁰ *Id.* at 6.

any other elements of the rate cases. This same design would be equally applicable and effective in an electric context.

Q: What would be a reasonable timeline for the MPSC to research affordability structures for DTE Electric customers in this rate case?

A: Fortunately, the MPSC has already done significant work to convene stakeholders around affordability, through the LIEPB, which coordinates the work of the EAAC and EWR-LI.¹⁷¹ The members of these bodies have considerable experience, community relationships, and technical expertise to submit considerations and recommendations on affordability structures within ninety to 120 days. The MPSC might take another sixty days to review, summarize, and provide Staff input on the proposals received from the LIEPB, the EAAC, the EWR-LI, and other interested parties. A Commission order could reasonably be expected within nine months of initiating the proceeding. Utilities might have another 180 days to implement the program.

Q: Please summarize your recommendations regarding data collection and reporting.

A: I recommend that the MPSC reinstate the monthly reporting requirements that it initially repealed in MPSC Case No. U-20757.¹⁷² Monthly reporting is critical to track trends and differentiate seasonal energy burdens that spike after periods of extreme weather.

Second, I recommend that the MPSC set a firm timeline for DTE to begin these reports by census tract and zip code. Assuming DTE already has this data available, the Company could produce reports within thirty to sixty days.

¹⁷¹ See Ex. DAO-150, Low-Income Energy Policy Board.

¹⁷² Dec. 21, 2023 U-20757 Order.

1 Third, I recommend that the MPSC require DTE to provide all reports in publicly
2 accessible and analyzable format, namely .csv or .xlsx. In many cases, DTE provides only
3 PDFs which cannot easily be converted. These files require extensive cleaning, which
4 materially burdens intervenors and introduces further opportunities for error.

5
6 **Q: Please summarize your recommendations regarding the reduction of nonessential**
7 **spending.**

8 **A:** The investments in additional low-income programs such as PIPP can be offset by
9 disallowing spending not compatible with affordability and public health. While not the
10 focus of my testimony, I support the recommendations of my colleague DAAO Witness
11 Jackson Koeppel to restrict DTE spending on aggressive and unnecessary capital expenses
12 that only serve to increase shareholder profits at the expense of ratepayers.

13
14 **Q: Does this conclude your written Direct Testimony?**

15 **A:** Yes.

1 MR. TEMPLETON: Thank you, your Honor.

2 On behalf of the Detroit Area Advocacy Organizations, I
3 move to bind in the Direct Written Testimony of Yunus
4 Kinkhabwala, that's spelled Y-u-n-u-s for the first name,
5 last name, K-i-n-k-h-a-b-w-a-l-a. Mr. Kinkhabwala's
6 direct testimony consisted of a cover page, a table of
7 contents, and 38 pages of questions and answers. As part
8 of his direct testimony, Mr. Kinkhabwala sponsored
9 Exhibits DAO-201 through DAO-224, inclusive, and I move
10 for the admission of those exhibits as well.

11 JUDGE WALLACE: All right. Is there any
12 objection to binding in the direct testimony of
13 Mr. Kinkhabwala?

14 Hearing none, the testimony is bound in.

15 Is there any objection to the admission
16 of Exhibits DAO-201 through DAO-224?

17 Hearing none, those exhibits are
18 admitted.

19 (Testimony bound in.)

20 - - -

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of DTE	)	
ELECTRIC COMPANY for authority to	)	Case No. U-21534
increase its rates, amend its rate schedules	)	
and rules governing the distribution and	)	ALJ Sally L. Wallace
supply of electric energy, and for	)	
miscellaneous accounting authority.	)	

DIRECT TESTIMONY OF YUNUS KINKHABWALA, PhD

ON BEHALF OF

DETROIT AREA ADVOCACY ORGANIZATIONS

(SOULARDARITY AND WE WANT GREEN, TOO)

July 26, 2024

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1 **I. Introduction and Summary of Qualifications**

2 **Q: Please state your name and business address.**

3 **A:** My name is Yunus Kinkhabwala, PhD. My business address is 1440 Broadway, Suite 750,
4 Oakland, California, 94612.

6 **Q: By whom are you employed and in what capacity?**

7 **A:** I am employed as a Senior Scientist by PSE Healthy Energy (Physicians, Scientists and
8 Engineers for Healthy and Sustainable Energy).

10 **Q: On whose behalf are you submitting this direct testimony?**

11 **A:** I am submitting this testimony on behalf of Soulardarity and We Want Green, Too,
12 collectively known as the Detroit Area Advocacy Organizations (DAAO) in this
13 proceeding.

15 **Q: Please summarize your qualifications, experience, and education.**

16 **A:** I received my B.S. in Physics from the University of Illinois at Urbana-Champaign. I
17 worked for nearly a decade in education and development in the United States, South
18 Africa, and Senegal. I earned my Ph.D. in Applied Physics from Cornell University as a
19 National Science Foundation Graduate Research Fellow. There, I developed novel
20 statistical methods and models of complex systems, including small-area demographics.
21 Since then, I have worked for nearly three years at PSE Healthy Energy. My work at PSE
22 Healthy Energy involves the analysis of energy transition pathways that maximize health,
23 equity, and environmental benefits. My main research focus is on energy equity, energy

1 efficiency, and integrated resource modeling and optimization. I have attached my resume
2 as Ex. DAO-201.

3
4 **Q: Have you testified before the Michigan Public Service Commission previously?**

5 **A:** No, I have not personally. I assisted my colleague Boris Lukanov in the preparation of his
6 testimony in a Consumers Energy's rate case (U-21389), and I have used similar language
7 in this testimony to describe the similar methods I have used here.

8
9 **Q: Have you testified or provided comments in similar state regulatory proceedings?**

10 **A:** Yes, I have provided testimony for Duke Energy's Biennial Integrated Resource Plans and
11 Carbon Plan, Docket No. E-100, SUB 179, before the State of North Carolina Utilities
12 Commission.

13
14 **Q: Are you sponsoring any exhibits?**

15 **A:** Yes. I am sponsoring the following exhibits:

16 DAO-201. Resume of Yunus Kinkhabwala, PhD.

17 DAO-202. *Introduction*, HOME ENERGY AFFORDABILITY GAP.

18 DAO-203. Michigan Public Service Commission, Energy Affordability and Accessibility
19 Collaborative, Assistance Programs and Credits Diagram FY20

20 DAO-204. Jihoon Min et al., *A High-Resolution Statistical Model of Residential Energy*
21 *End Use Characteristics for the United States*, 14 J. INDUS. ECOLOGY 791
22 (2010).

1 DAO-205. Christopher Jones & Daniel M. Kammen, *Spatial Distribution of US*

2 *Household Carbon Footprints Reveals Suburbanization Undermines*

3 *Greenhouse Gas Benefits of Urban Population Density*, 48 ENVTL. SCI. &

4 TECH. 895 (2014).

5 DAO-206. DTE, *Low-Income Programs* (last accessed July 11, 2024).

6 DAO-207. U.S. Energy Information Administration, EIA Form 861, spreadsheet entitled

7 Sales_Ult_Cust2022, DTE Electric.

8 DAO-208. ADM Associates, *Evaluation of the Percentage of Income Payment Plans*.

9 DAO-209. California Public Utilities Commission, *Low-Income Oversight Board 3rd*

10 *Quarterly Meeting* (Sept. 29, 2021).

11 DAO-210. Michigan Department of Environment, Great Lakes, and Energy, *Energy*

12 *Efficiency in Michigan Homes*.

13 DAO-211. U.S. Department of Energy, *Energy Saver: Furnaces and Boilers*

14 DAO-212. Eric D. Lebel et al., *Methane and NO_x Emissions from Natural Gas Stoves,*

15 *Cooktops, and Ovens in Residential Homes*, 56 ENVTL. SCI. & TECH. 2529

16 (2022).

17 DAO-213. Brett C. Singer et al., *Pollutant Concentrations and Emission Rates from*

18 *Natural Gas Cooking Burners Without and With Range Hood Exhaust in Nine*

19 *California Homes*, 122 BUILDING & ENV'T 215 (2017).

20 DAO-214. Eric D. Lebel et al., *Composition, Emissions, and Air Quality Impacts of*

21 *Hazardous Air Pollutants in Unburned Natural Gas from Residential Stoves*

22 *in California*, 56 ENV'T SCI. & TECH. 15828 (2022).

1 DAO-215. Taylor Gruenwald et al., *Population Attributable Fraction of Gas Stoves and*
 2 *Childhood Asthma in the United States*, 20 INT’L J. ENVTL. RES. & PUB.
 3 HEALTH 1 (2023).

4 DAO-216. Boris R. Lukanov & Elena M. Krieger, *Distributed Solar and Environmental*
 5 *Justice: Exploring the Demographic and Socio-Economic Trends of*
 6 *Residential PV Adoption in California*, 134 ENERGY POL’Y 110935 (2019).

7 DAO-217. Galen Barbose, et al., *Income Trends of Residential PV Adopters: An Analysis*
 8 *of Household-Level Income Estimates* (Apr. 2018).

9 DAO-218. Arjun Makhijani, Yunus Kinkhabwala, et al., *Energy Affordability in*
 10 *Maryland* (Feb. 2023).

11 DAO-219. DTE Energy, *Demand Response to Lower Your Energy Costs* (last accessed
 12 July 11, 2024).

13 DAO-220. Kari Lydersen, *DOE Looks to Illinois to Lead on Low-Income Community*
 14 *Solar*, ENERGY NEWS NETWORK (Aug. 18, 2022).

15 DAO-221. REWIRING AMERICA, *Summary of High-Efficiency Electric Home Rebate Act*
 16 *(HEEHRA)*.

17 DAO-222. U.S. Department of Energy, Weatherization Assistance Program PY22 State
 18 Plan (Michigan) (excerpt).

19 DAO-223. Anna M. Brockway et al., *Inequitable Access to Distributed Energy Resources*
 20 *Due to Grid Infrastructure Limits in California*, 6 NATURE ENERGY 892
 21 (2021).

22 DAO-224. Benjamin K. Sovacool et al., *Energy Decisions Reframed as Justice and*
 23 *Ethical Concerns*, 1 NATURE ENERGY 1 (2016).

1 **Q: What is the purpose of your testimony?**

2 **A:** The general purpose of my testimony is to present the landscape of current affordability
3 issues facing DTE Electric (DTE or the Company) customers and to propose strategies to
4 increase energy affordability for low-income households. Specifically, my goal is to:

- 5 ● Evaluate energy cost burden disparities across the Company's service territory
6 and across different socioeconomic and demographic segments of customers;
- 7 ● Define and calculate the energy affordability gap, i.e. the total dollar amount of
8 annual bill assistance needed to bring all households down to the cost burden
9 thresholds;
- 10 ● Project the evolution of energy cost burdens and the energy affordability gap in
11 the context of potential bill assistance programs, such as a Percent of Income
12 Payment Plan (PIPP); and
- 13 ● Quantify the potential impact of residential energy waste reduction and clean
14 energy interventions that can help lower energy cost burdens over time while
15 simultaneously achieving climate targets and reducing overall societal costs.

16

17 **II. Landscape of Energy Affordability in DTE's Service Territory**

18 **Q: What is the current scale of affordability challenges for DTE's customers?**

19 **A:** I estimate that DTE's low-to-moderate income customers (LMI) with incomes less than
20 twice the federal poverty level (FPL) were billed \$450 million more for home energy than
21 they could afford in 2021 according to a six percent of income threshold, affecting 430,000

LMI customers. This sum is known as the energy affordability gap.¹ In addition, households earning greater than twice the FPL were also billed \$30 million more than six percent of their income in 2021. In total, approximately 515,000 households, or roughly 25 percent of DTE's residential customers, are energy cost-burdened and are billed for the approximately \$480 million a year to cover this unaffordable gap. When considering electricity alone, we calculate an LMI electricity affordability gap of roughly \$380 million. These sums roughly approximate the amount of annual bill assistance that would be needed to make energy affordable for all.

Q: How are the energy and electricity affordability gaps calculated?

A: Energy cost burden is defined as the percentage of household income spent on residential energy bills (inclusive of all residential fuels and electricity but excluding transportation). Energy cost burdens above six percent of income are generally considered high.² We note, however, that six percent is a lower bound threshold as other non-discretionary expenses that are not captured by this data strain many households, and so this affordability gap is likely a conservative estimate. To calculate the energy affordability gap, I sum the portion of the bill beyond six percent for all households. I also separate bills into an LMI-specific affordability gap which is the same as the affordability gap, but only for households with incomes less than twice the FPL. While higher-income households also suffer due to high

¹ The concept was introduced by Fisher, Sheehan, and Colton, who have provided estimates of the energy affordability gaps down to the county scale across the U.S. for many years. *See, e.g.,* Ex. DAO-202. *Introduction*, HOME ENERGY AFFORDABILITY GAP.

² The six percent threshold is derived from combining a 1981 amendment to the 1969 Housing and Urban Development Act, which states that housing costs, including utilities, should not exceed 30 percent of gross income, with a conventional rule of thumb that energy-related expenses should not exceed 20 percent of housing costs. *See also* discussion and citations note 1, *supra*.

1 bills, I separate out the LMI portion of the gap as the income levels of these LMI
2 households are below the common thresholds to receive bill assistance.

3 The electricity affordability gap is different from the energy affordability gap in
4 that it only considers electricity bills and does not consider other fuels, such as natural gas
5 or propane. To calculate the electricity affordability gap, I assume a three percent threshold
6 for electricity bills for homes that do not heat with electricity and a six percent threshold
7 otherwise. This three percent threshold for electric bills is used in other jurisdictions³ and
8 is reinforced by my estimates that electricity comprises roughly 52 percent of household
9 bills in the Building America cold climate zone, in which DTE customers are situated, for
10 non-electrically heated households. I consider households in the same climate since, in
11 warmer climates, electricity represents a greater proportion of the bill due to higher cooling
12 and lower heating needs. As discussed later, I note that DTE customers spend significantly
13 more than half of their bills on electricity due to higher relative electricity rates.

14 I note that these estimates were made using data from the year 2021, so all costs
15 are in 2021 dollars, and I have not inflation-corrected them to the current year.
16

17 **Q: Why is energy affordability important, and how does that relate to energy equity?**

18 **A:** As outlined in testimony from Witness Schott and Witness Makhijani, energy bills strain
19 households in a variety of aspects. For example, they lead to unsafe energy use, such as
20 using kitchen stoves for heating; increased risk of eviction and homelessness; residents
21 keeping homes at uncomfortable or unsafe temperatures; and forgoing other essential
22 expenses such as medical care. These household-level challenges impact taxpayers and

³ See, e.g., Rules Regarding Electric Utilities 4 CCR 723-3; Rules Regarding Gas Utilities 4 CCR 723-4.

1 society at large, such as through the costs of providing support to the unhoused and higher
2 medical costs for unhoused populations.

3 Among other aspects, energy equity recognizes that disadvantaged communities
4 often do not have equal access to clean, healthy, and affordable energy. Improving energy
5 affordability in communities overburdened by bills is one pathway towards energy equity.
6 One estimate of how to achieve energy affordability for all is to pay for this affordability
7 gap one way or another—whether through bill assistance, ratepayers covering the cost of
8 accounts that have gone into arrears, or increased investments in LMI energy waste
9 reduction (EWR) interventions that lower energy bills. As Witness Schott and Witness
10 Makhijani illustrate, the current societal burden of the currently unaddressed degree of
11 energy poverty is high and manifests in many aspects of life.

12
13 **Q: Is there sufficient bill assistance available for existing programs?**

14 **A:** No. While bill assistance provides direct financial support to make bills more affordable,
15 current programs can only cover roughly 20 percent of the affordability gap, leaving 80
16 percent still owed by households that cannot afford it.

17 Several state and federal programs provide energy bill assistance for low-income
18 families in DTE's territory.⁴ One is the federal Low-Income Home Energy Assistance
19 Program (LIHEAP), which distributes roughly \$60 million in home heating credits through
20 the state Department of the Treasury and another \$60 million in crisis assistance through
21 the State Emergency Relief (SER) program. Another is the Michigan Energy Assistance

⁴ See Ex. DAO-203. Michigan Public Service Commission, Energy Affordability and Accessibility Collaborative, Assistance Programs and Credits Diagram FY20.

1 Program (MEAP), which provides energy bill assistance for households with incomes
2 below 150 percent of the federal poverty level, along with self-sufficiency services. There
3 is \$50 million of funding available to the program through the state's Low-Income Energy
4 Assistance Fund (LIEAF) and another \$6 million through LIHEAP for self-sufficiency
5 services. Additionally, other smaller sources of funding, such as the Heat and Warmth fund
6 from THAW, exist. All in all, we estimate that the total funding available for low-income
7 bill assistance for DTE customers is \$90 million, only one-fifth of the amount needed to
8 make LMI DTE customers' bills affordable.

9
10 **Q: How do you calculate energy cost burdens?**

11 **A:** Energy cost burden and electricity cost burden are typically calculated by dividing a
12 household's annual total energy bills or electricity bills, respectively, by its gross income
13 to obtain the fraction of income spent on residential energy needs.

14 Estimating energy bills at the household level, however, is not straightforward.
15 While fuel prices are generally available from public sources, individual residential energy
16 consumption data and the associated energy bills are not publicly available for privacy
17 reasons. This means that fuel consumption and energy bills at fine geographic scales
18 conducive to highly granular spatial or demographic analysis, such as at the census tract or
19 the household level, have to be estimated.

20 To solve this technical problem, PSE Healthy Energy has developed a regression
21 model based on a variety of geographic, demographic, housing-related, and climate
22 variables to generate a simulated portfolio of energy use for all residential buildings and
23 households within the Company's territory. Our model builds on previously developed

1 methods⁵ and includes the most used residential energy fuels in Michigan: natural gas,
 2 electricity, propane, fuel oil, and wood. Predictive variables were extracted from the U.S.
 3 Energy Information Administration's 2020 Residential Energy Consumption Survey
 4 (RECS) and matched with household-level data by census tract from the U.S. Census
 5 Bureau's 2017-2021 American Community Survey (ACS). Using the modeled energy
 6 consumption dataset, we can generate the most accurate and fine-grained estimates of
 7 household energy bills to date. In addition, we can estimate how certain investments such
 8 as weatherization, heat pumps, or rooftop solar can affect energy needs, carbon emissions,
 9 and the financial burden on low-income households.

10 We note that in the analysis below, we look at combined energy cost burdens,
 11 inclusive of both electricity and other residential fuel costs. This allows for a fair
 12 comparison between fully electrified households and those with mixed use of electricity
 13 and other fuels. Along with including the most commonly used residential energy fuels,
 14 the analysis also includes the most common residential end uses: space heating, space
 15 cooling, water heating, and appliances.

⁵ See Ex. DAO-204. Jihoon Min et al., *A High Resolution Statistical Model of Residential Energy End Use Characteristics for the United States*, 14 J. INDUS. ECOLOGY 791, (2010); Ex. DAO-205. Christopher Jones & Daniel M. Kammen, *Spatial Distribution of US Household Carbon Footprints Reveals Suburbanization Undermines Greenhouse Gas Benefits of Urban Population Density*, 48 ENVTL. SCI. & TECH. 895 (2014).

1 **Q: What is the distribution of energy cost burdens in DTE's territory?**

2 **A:** Shown in Figure 1 below is the number of DTE customers for each FPL income bracket.

3 Each bracket is then further divided by colors that show the ranges of energy cost burdens.

4 We see that nearly all households with incomes less than 150 percent of the FPL
 5 have energy cost burdens greater than six percent of income. These households are eligible
 6 for most assistance programs in Michigan. However, we also see that a majority of
 7 households (roughly 70 percent or over 100,000 customers) between 150 and 200 percent
 8 of the FPL are also still cost-burdened and are not eligible for most bill assistance programs
 9 with the exception of the Shutoff Protection Plan.⁶ In total, roughly 180,000 households
 10 with incomes greater than 150% of the FPL are cost-burdened. In other words, roughly \$85
 11 million (see Figure 2) of the energy affordability gap is due to households that cannot
 12 receive bill assistance due to exceeding the 150 percent of FPL income threshold.⁷

⁶ Ex. DAO-206. DTE, *Low-Income Programs* (last accessed July 11, 2024).

⁷ \$85 million is approximately equal to \$56.21 million (for household incomes between 150% and 199% of FPL) plus \$21.36 million (for household incomes between 200% and 249% of FPL) plus \$7.68 million (for household incomes between 250% and 299% of FPL).

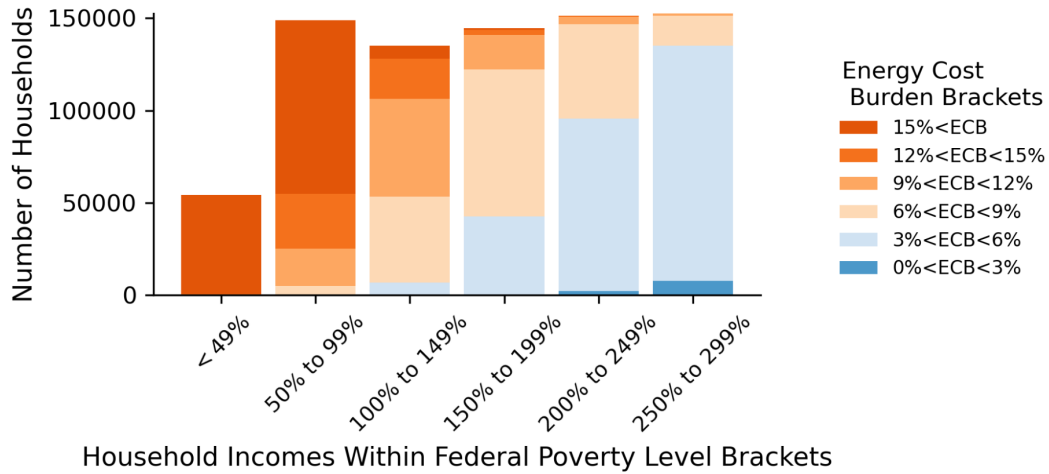


Figure 1: Numbers of households within federal poverty level brackets, shaded by their cost burden.

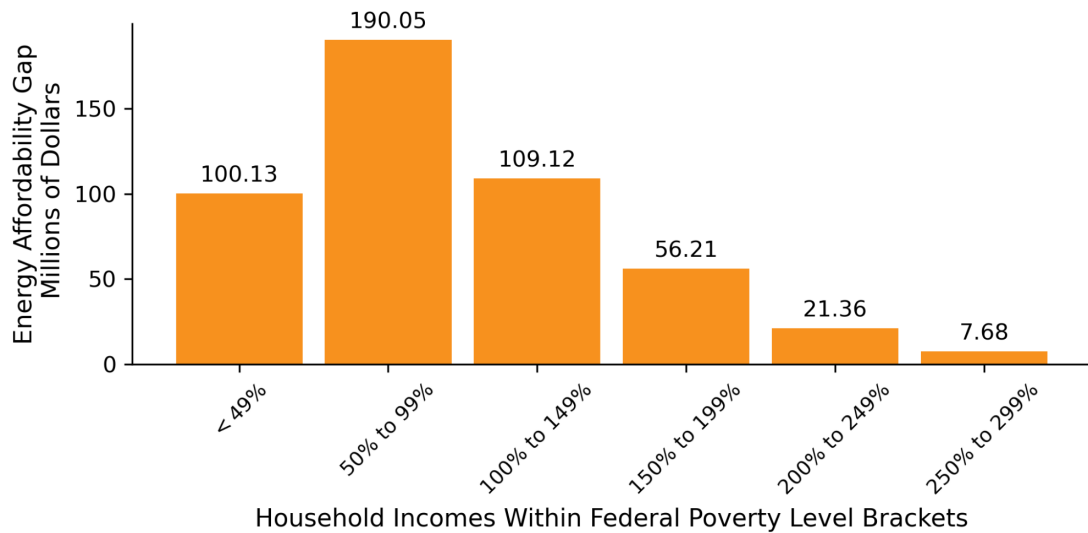


Figure 2: Annual energy affordability gap broken down by federal poverty level income bracket. The gap is in units of 2021 dollars.

Q: What are the geographic trends in energy affordability?

A: Shown in Figure 3, we see affordability trends are not uniform across the DTE territory. Areas with the highest typical burdens are concentrated in the Detroit area. Additional areas also occur in more northern areas of DTE's service territory.

These trends are due to multiple factors. In metro Detroit, census tracts exist with high concentrations of low-income households, shown shaded in green on the map. In more rural areas, energy costs are typically higher because homes are larger and they rely more often on propane, which is a more expensive fuel for heating than gas. It is important to note that more people live in urban areas than in rural areas and that even where the median cost burden is low, households can still struggle to pay their bills.

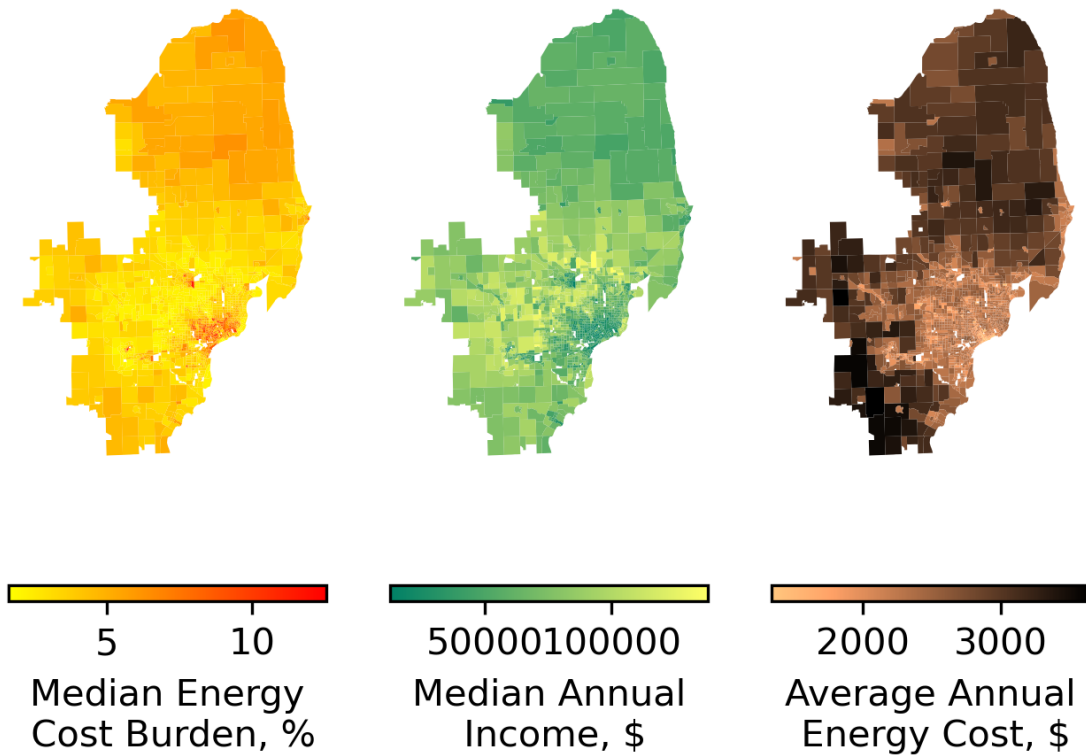


Figure 3: Median energy cost burden (left) median annual household gross income (middle) and average total annual home energy cost (right) for census tracts in DTE territory.

Q: What are some of the demographic trends in energy affordability?

A: In the two maps below (Figure 4), we plot the gap broken down by race for ethnic and racial groups for each census tract. Each dot represents all the households that identify with a given ethnic/racial group in a given tract, resulting in five dots (Asian, Black, Hispanic, White or Other) for each tract. Dots are shifted to avoid overlap. Areas of dots represent the total energy affordability gap of households in that subgroup. The black rectangle in the map on the left matches the zoomed-in area of Detroit in the inset on the right.

Multiple trends can be seen in Figure 4. First, we see that energy affordability is an issue across all of DTE's service area, with need for bill assistance in all parts. In the more rural parts, the dots are more spread out due to sparsely populated rural areas. Second, we see that most of the gap is concentrated in the Detroit area. Moreover, the zoomed-in view of the Detroit area on the right shows a high concentration of the gap in neighborhoods that are predominantly occupied by persons of color.

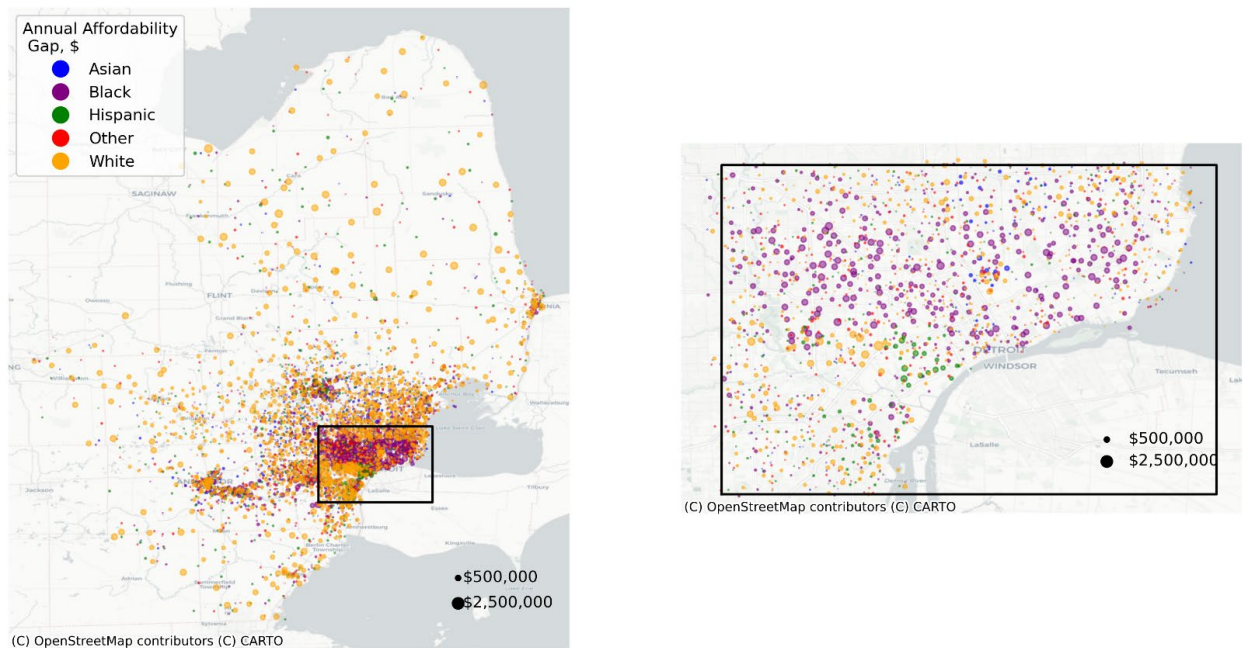


Figure 4: Dot map of Energy Affordability Gap.

1 **Q: How is energy equity distributed across historically marginalized communities?**

2 **A:** Historically marginalized communities and environmentally burdened communities are
 3 homes to disproportionately greater numbers of households that are energy-cost-burdened.
 4 For example, in Justice40 tracts in DTE territory, designated by the federal government
 5 and home to roughly a quarter of customers, 44 percent of DTE customers are energy-cost-
 6 burdened, while outside of these tracts, only 20 percent are energy-cost-burdened
 7 customers. Importantly, the Justice40 designation increases access to federal funds that can
 8 be used to improve affordability such as those discussed below. A similar trend exists using
 9 Michigan EJScreen; 41 percent of DTE customers in communities that are higher than the
 10 80th percentile, according to Michigan EJScreen, are energy-cost-burdened, but only 20
 11 percent of those outside these tracts are energy-cost-burdened.

12
 13 **Q: How do DTE's current rates impact affordability?**

14 **A:** DTE residential rates are higher in 2022 than 80 percent of residential rates when
 15 compared to other investor-owned utilities with greater than half a million residential
 16 customers. I calculated these average rates by dividing revenues by sales as reported to
 17 the EIA on Form 861.⁸

18 DTE's higher rates result in greater struggles with affordability. For example, for
 19 homes that do not heat their homes with electricity, we estimate that LMI DTE customer
 20 electricity bills for fossil fuel-heated homes are, on average, \$1,370 annually, compared
 21 to \$1,140 for other LMI households in the same climate zone that have similar cooling

⁸ See Ex. DAO-207. U.S. Energy Information Administration, EIA Form 861, spreadsheet entitled Sales_Ult_Cust2022, DTE Electric excerpt.

1 electric loads. This is nearly 20 percent higher. As such, electricity bills make up a
2 greater proportion of overall energy bills for DTE's LMI customers. In DTE, the same
3 LMI subset of customers pays 63 percent of their home energy bills for electricity as
4 opposed to 52 percent for other LMI customers in the same climate zone. As such,
5 DTE's higher rates result in a high electricity affordability gap.
6

7 **Q: How do unaffordable bills result in shutoffs?**

8 **A:** DTE sends households disconnection notices and shuts them off due to nonpayment. These
9 have been increasing, as seen in Figure 5. Protections exist for vulnerable populations, but
10 these protections do not fully cover all the need for two reasons. First, as shown in Figure
11 5, customers are labeled as "Non-Low-Income" and "Low-Income." However, only
12 roughly 31 percent of eligible customers are enrolled in LIHEAP programs on a five-year
13 average.⁹ This 31 percent would fall into the "Low-Income" categorization according to
14 DTE. This means that a meaningful portion of the other 69 percent of low-income
15 customers may be mistakenly identified as "Non-Low-Income," and potentially comprise
16 a significant proportion of the disconnections shown in the figure. More details are
17 provided by Witness Schott. Also, as mentioned previously, income eligibility for such
18 programs is limited to households earning less than 150 percent of the FPL, but many
19 households with incomes greater than that are cost-burdened. So many of the customers
20 labeled as "Non-Low-Income" are likely paying greater than six percent of their income
21 for energy but are above the 150% threshold. Given the low threshold of income for
22 assistance and the under-enrollment of LIHEAP, it seems likely that many of the

⁹ See Makhijani Direct Testimony.

households that are categorized in the “Non-Low-Income” category are forced to pay bills beyond their financial means.

Filter by Utility

DTE Energy Co. ▼

View all shutoffs by Service:

Shutoffs by Service

Additional information is available:

Discontinuation Notices Sent to Customers

Shutoffs, all other reasons

Customer Disconnections by Utility

All

● Non-Low-Income ● Low-Income ● Senior Non-Low-Income

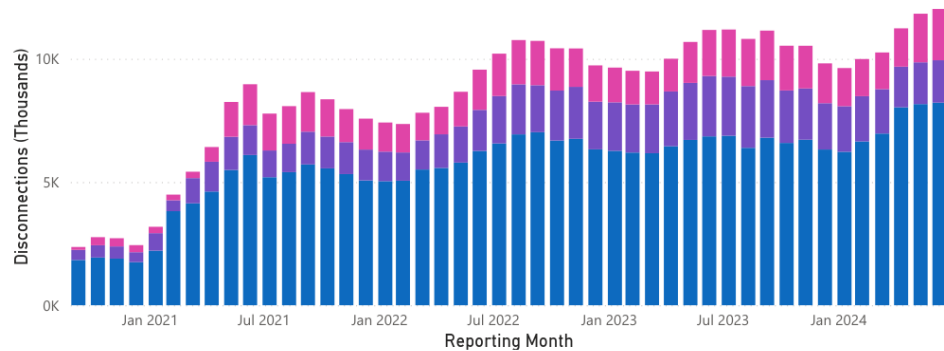


Figure 5: Screenshot from Michigan Public Service Commission Utility Customer Data Tool of historic shutoffs by DTE broken down by income category.

III. Reducing Energy Cost Burdens and the Affordability Gap Through Bill Assistance

Q: How could a Percent of Income Payment Plan (PIPP) help to cover the energy affordability gap within DTE’s service territory?

A: Pooling all available funding resources into a Percent of Income Payment Plan (PIPP) for LMI households, with additional funding, is one prudent approach. A PIPP program caps utility bills for participating households at the six percent affordability threshold. Assuming an income cutoff of 200 percent of the FPL (which is a common threshold for assistance programs and which would be greater than the current 150 percent threshold), such a program would be a sensible, short-term, bill-assistance solution to closing the \$450 million LMI energy affordability gap in the short term. However, this would exclude the

1 additional roughly \$30 million gap for households with incomes greater than twice the
2 FPL.

3 In concept, a PIPP program is the most comprehensive bill-assistance approach to
4 reducing energy cost burdens because it guarantees sufficient assistance to reduce
5 household energy bills to an affordable level. It also has the advantage that assistance levels
6 needed would automatically decrease over time as investments in LMI weatherization,
7 electrification, community solar, and demand response reduce the energy affordability gap,
8 as I describe in the next section of this testimony.

9 For PIPP and other bill assistance measures to be effective, enrollment barriers must
10 be minimized. For example, the Colorado PIPP program has suffered from low
11 participation rates due to barriers to enrollment such as lack of information, citizenship
12 requirements, and others.¹⁰ By contrast, the California Alternate Rates for Energy (CARE)
13 program has participation rates close to 100 percent, reflecting the flexibility of the
14 program.¹¹ Ease of enrollment, multilingual outreach, and self-attestation of income (with
15 an audit of a small sample) are all key attributes of the California program.

16 One implementation challenge is that some energy bills are separate. For example,
17 DTE does not provide propane. In this case, we can use the LMI *electricity* affordability
18 gap in DTE's territory. As described above, this gap is attributed solely to electricity and
19 only includes households with incomes less than 200 percent of the FPL, the suggested
20 poverty threshold used here, but greater than the 150 percent threshold common for many
21 bill assistance programs in Michigan.¹² This LMI electricity gap is approximately \$380

¹⁰ Ex. DAO-207. ADM Associates, *Evaluation of the Percentage of Income Payment Plans*.

¹¹ Ex. DAO-209. California Public Utilities Commission, *Low Income Oversight Board 3rd Quarterly Meeting* (Sept. 29, 2021).

¹² See Ex. DAO-206.

million, which is 85 percent of the total LMI energy affordability gap. If we apportion 85 percent of the existing \$90 million bill assistance for the electric bill assistance, that results in \$76 million. Subtracting this amount from the \$380 million leaves a \$304 million gap to fully fund an electric PIPP program in DTE service territory for households under 200 percent of the FPL. For scale, we can consider how much of current rates would be needed to fund this program. If we divide this \$304 million sum across DTE's 41 million MWh of total sales in 2022 as reported to the EIA, we calculate 0.74 cents/kWh in 2021 dollars would be needed, around four percent of the average residential rate charged in 2022 of 18.74 cents/kWh found by dividing the 2022 reported residential revenue of \$2.91 billion by residential sales of 15.8 TWh according to the EIA 861 form.¹³

Q: Is bill assistance the best long-term approach for addressing energy cost burdens?

A: While direct bill assistance is a critical short-term lifeline for LMI households, it treats only the symptoms and does not fundamentally change the scale of the energy affordability problem—if assistance is suddenly dropped, energy cost burdens and the affordability gap would immediately revert to the earlier status quo. Furthermore, bill assistance does not help meet climate targets, and it does not make homes healthier and more efficient.

In contrast, direct investments in clean energy upgrades and housing retrofits for LMI households, including weatherization, electrification, community solar, and demand response, bring about systemic and long-term reductions in energy cost burdens that lower the energy affordability gap while simultaneously helping achieve climate and public

¹³ Ex. DAO-207.

1 health goals. Over time, this approach structurally shrinks the energy affordability gap and
2 reduces overall societal costs by lowering the total amount of annual funding needed for
3 bill assistance, as we show in the following section.

4
5 **IV. Reducing Energy Cost Burdens and the Affordability Gap Through EWR and**
6 **Clean Energy Investments**

7 **Q: What is the role of LMI weatherization, efficiency, electrification, community solar,**
8 **and demand response (DR) in reducing energy cost burdens and promoting energy**
9 **affordability and environmental justice?**

10 **A:** Investments in LMI weatherization, efficiency, electrification, community solar, and DR
11 can provide long-term reductions in energy cost burdens for the neediest households while
12 simultaneously reducing greenhouse gas emissions and bringing health co-benefits. This
13 analysis repeats methods performed for the Consumers Energy rate case (U-21389).

14 **Weatherization and building efficiency** can lower energy bills for LMI
15 households by reducing overall energy use and the need for heating or cooling. Strategies
16 include measures such as installing insulation in walls, floors, ceilings, ducts, and pipes;
17 installing smart control systems and thermostats for heating and cooling; replacing
18 inefficient appliances and lights; sealing windows and doors or installing double-pane
19 windows; and improving ventilation, among others. Efficiency includes replacing
20 appliances such as outdated refrigerators and updating incandescent lighting.

21 Because such measures often require significant upfront investments, they are
22 difficult for LMI homeowners to finance since they lack capital, unless they receive
23 grants, on-bill financing, or support through public programs such as the federal

1 Weatherization Assistance Program. In addition, almost half of all LMI households in
 2 DTE's territory are renters, and the vast majority of renters are responsible for paying
 3 their own utility bills, creating a classic split incentive problem where renters pay for
 4 energy used while landlords are responsible for energy-saving upgrades. All this can limit
 5 access to building efficiency measures for LMI, renter, and BIPOC communities, leading
 6 to a vastly inequitable distribution of these resources.

7 **Beneficial electrification** of homes using efficient heat pump technology can also
 8 result in significant bill savings. Figure 6 shows our estimated savings in annual energy
 9 bills for every single household within DTE territory, assuming all homes were instantly
 10 outfitted with efficient heat pumps.¹⁴ We assume conversion to a cold-weather heat pump
 11 results in average annual heating energy savings of 66 percent when replacing thermal
 12 heating sources and 60 percent when replacing resistive heating, which corresponds to a
 13 heat pump heating seasonal performance factor (HSPF2) of 8.5 and to efficiencies of 85
 14 percent and 100 percent for existing thermal and electric resistive heating respectively.¹⁵
 15 I estimate that the average annual savings of switching from electric resistive, propane, or
 16 fuel oil heating to efficient cold-weather heat pumps are approximately \$600, \$300, and
 17 \$100, respectively.

18 While switching from natural gas to heat pumps may not be currently economical
 19 for many households in DTE territory because of the relatively high electricity rates and
 20 low gas prices, it is essential to switch homes to heat pumps in order to meet Michigan's
 21 climate goals. However, if electricity rates increase, then electrification will become even

¹⁴ These costs exclude conversion costs and only consider annual energy usage.

¹⁵ See Ex. DAO-210. Michigan Department of Environment, Great Lakes, and Energy, *Energy Efficiency in Michigan Homes*; Ex. DAO-211. U.S. Department of Energy: *Energy Saver: Furnaces and Boilers*

more financially burdensome for LMI customers. In that case, weatherization and other interventions that would counter a rise in energy costs would be even more vital to keeping bills affordable for LMI households.

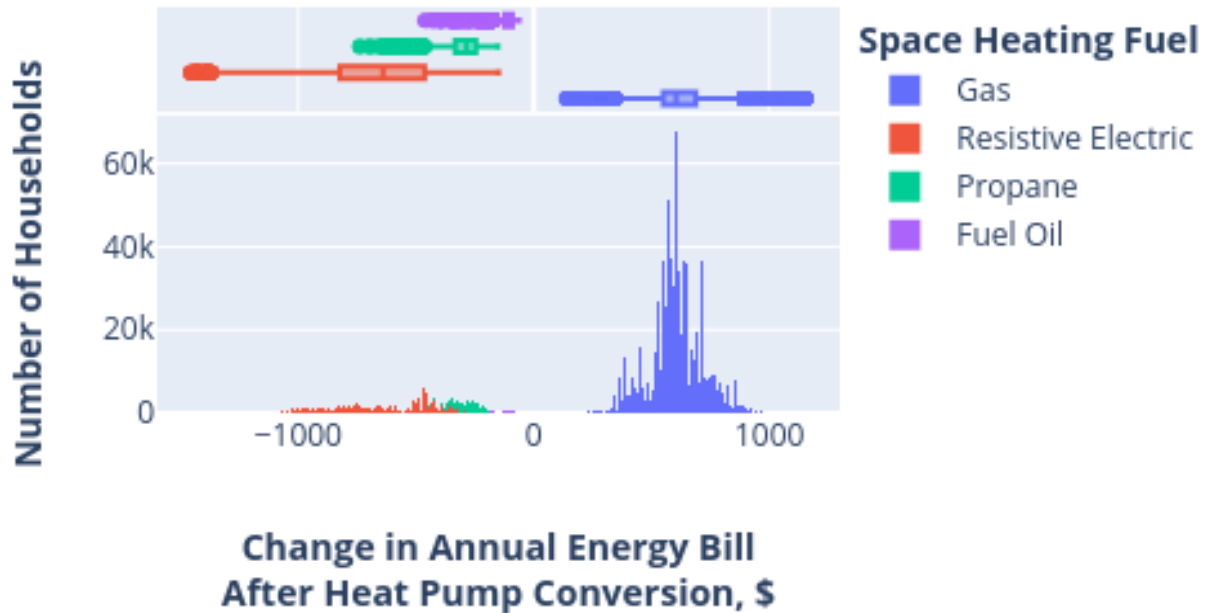


Figure 6: Changes in annual energy bills for all households in DTE service territory after immediate conversion to efficient heat pumps, broken down by fuel type at 2021 rates. Negative changes represent savings to customer bills, with only natural gas-heated homes experiencing increases in bills after heat pump conversions.

In addition, the electrification of household appliances located within living spaces, such as gas stoves and ovens, can eliminate combustion-related emissions that contribute to poor indoor air quality and increased health risks. Studies have shown that the one-hour national ambient air quality standard for NO₂ (100 ppb) can be exceeded within minutes of gas stove usage, particularly in small kitchens with poor ventilation.¹⁶

¹⁶ Ex. DAO-212. Eric D. Lebel et al., *Methane and NO_x Emissions from Natural Gas Stoves, Cooktops, and Ovens in Residential Homes* 56 ENVTL. SCI. & TECH. 2529 (2022); Ex. DAO-213. Brett C. Singer

1 Leakage from gas stoves and ovens not in use can also result in concentrations of
 2 benzene (a known carcinogen) exceeding the California EPA eight-hour and chronic
 3 reference exposure level and, in some cases, be comparable to tobacco smoke.¹⁷ Roughly
 4 one-eighth of childhood asthma in the United States may be attributable to the use of gas
 5 stoves.¹⁸

6 **Demand response and community solar** can bring additional bill savings for
 7 LMI households. Enabling LMI households to participate in demand response through
 8 broadband access and smart appliances can also help bring costs down even further.
 9 Currently, multiple programs exist for DTE customers that reward minimizing electricity
 10 use when grid demand is expected to peak, typically in the summer. Education about such
 11 programs is needed to ensure that LMI households can participate and receive the
 12 financial incentives that accompany participation.

13 Bill credits for distributed generation through solar can also help reduce bills,
 14 which will be even more important as homes are electrified to meet climate goals. We
 15 emphasize community solar rather than rooftop solar because it is accessible to those who
 16 do not own their own rooftops and can be a more cost-effective strategy than rooftop
 17 installations owned by individual homeowners. Historically, rooftop solar has been
 18 disproportionately adopted by higher-income households due to the high upfront costs

et al., *Pollutant Concentrations and Emission Rates from Natural Gas Cooking Burners Without and With Range Hood Exhaust in Nine California Homes*, 122 BUILDING & ENV'T 215 (2017).

¹⁷ Ex. DAO-214. Eric D. Lebel et al., *Composition, Emissions, and Air Quality Impacts of Hazardous Air Pollutants in Unburned Natural Gas from Residential Stoves in California*, 56 ENVTL. SCI. & TECH. 15828 (2022).

¹⁸ Ex. DAO-215. Taylor Gruenwald et al., *Population Attributable Fraction of Gas Stoves and Childhood Asthma in the United States*, 20 INT'L J. ENVTL. RES. & PUB. HEALTH 1 (2023).

1 and other barriers to entry.¹⁹ Consequently, low-income, renter, and other cost-burdened
 2 populations have been unable to reap the bill-stability and cost-reduction benefits of
 3 rooftop solar enjoyed by higher-income, solar-adopting households.

4 Additionally, as weather extremes become more common due to climate change,
 5 community solar paired with battery storage can be a valuable resource for conferring
 6 additional resilience benefits to vulnerable communities. Community solar plus storage
 7 can be used in lieu of polluting backup generators to ensure reliable access to energy
 8 during disasters and may be particularly impactful for groups that would benefit from
 9 enhanced resilience for health reasons. Witness Makhijani discusses these considerations
 10 in detail in his testimony.

11
 12 **Q: How much do weatherization, electrification, community solar, and demand**
 13 **response typically decrease energy bills?**

14 **A:** Each of these resources can change bills by varying amounts depending on the home type,
 15 heating fuel type, etc. Some have much higher potential for efficiency reductions than
 16 others. For the purpose of this testimony, we make the following assumptions about the
 17 bill impacts of a typical investment in each household:

18 **Weatherization and Efficiency:** We use previously estimated costs and energy
 19 savings modeled from studies of WAP programs.²⁰ Typical reductions of total energy use
 20 across all fuels from programs is 15% to 20% when the home is weatherized, and

¹⁹ Ex. DAO-216. Boris R. Lukanov & Elena M. Krieger, *Distributed Solar and Environmental Justice: Exploring the Demographic and Socio-Economic Trends of Residential PV Adoption in California*, 134 ENERGY POL'Y 110935 (2019); Ex. DAO-217. Galen Barbose et al., *Income Trends of Residential PV Adopters: An Analysis of Household-Level Income Estimates* (Apr. 2018).

²⁰ Ex. DAO-218. Arjun Makhijani, Yunus Kinkhabwala, et al., *Energy Affordability in Maryland* (2023) at 165 and fig.5-3.

1 weatherization costs an average of \$5,250 in 2021 dollars.²¹ Much greater average
2 reductions are possible, but this value represents the typical levels achieved through
3 federally funded programs, and we assume retrofits would be fully funded by grants
4 through low-income programs like the WAP.

5 **Heat Pump Conversion:** Efficient cold-climate heat pumps reduce bills for
6 essentially all households except those that use natural gas for heating, although there are
7 also health benefits of electrifying gas homes, as discussed above. We assume that existing
8 propane and fuel oil heating systems have an efficiency of 85 percent, while resistive
9 heated homes have an efficiency of 100 percent. They are replaced by heat pumps with
10 heating seasonal performance factors (HSPF2) of 8.5, greater than the minimum required
11 value in Michigan of 7.5. These assumptions lead to a 64% and 60% reduction in the
12 absolute energy needed to heat a home compared to fuel oil/propane and resistive heating,
13 respectively.

14 We also note that modern heat pumps are more efficient than existing cooling
15 systems and thus would also reduce summer peak consumption for many homes.
16 Additionally, financed retrofits of owner-occupied low-income homes provide additional
17 financial benefits to such households by defraying the cost of replacing or maintaining
18 aging systems. We do not include these additional financial benefits in the analysis here.

19 **Demand Response:** DTE offers a variety of residential demand response programs
20 that vary depending on home type. These include programs that cycle air conditions,
21 temporarily turn off electric water heaters, tune thermostats, or shift hours of EV charging.
22 Not all homes are eligible for all programs depending on the technology available at home,

²¹ *Id.*

so for the purpose of this analysis, we assume an annual bill savings of \$50, which is equal to the incentive offered to customers enrolled in the Smart Savers program.²² We note that the peak demand through heating electrification will increase the winter peak, thus increasing the need for winter demand response in addition to the summer programs currently available.

Community Solar: Community solar pilots exist but data regarding their impacts on bills in Michigan are limited. The U.S. Department of Energy aims to increase the percentage bill savings from 10 percent to 20 percent, and a low-income community solar pilot in Illinois guarantees bill savings of 50 percent for low-income customers.²³ For this analysis, we model the bill savings as an annual 20 percent reduction in the energy rate for community solar subscribers.

Q: If all energy-burdened households received weatherization/efficiency, beneficial electrification, community solar, and demand response, how would that impact energy cost burdens and the affordability gap?

A: When implemented sequentially, these four interventions can lead to drastic and long-term reductions in energy cost burdens. I estimate that, by implementing all of these investments for all LMI households, the number of cost-burdened LMI customers of DTE Electric would decrease from 430,000 to 240,000 and simultaneously decrease the energy affordability gap from \$450 million to \$140 million. The box and whisker plots in Figure 7 show the 2021 distribution of energy cost burdens for each income bracket within DTE

²² Ex. DAO-219. DTE Energy, *Demand Response to Lower Your Energy Costs* (last accessed July 11, 2024).

²³ Ex. DAO-220. Kari Lydersen, *DOE Looks to Illinois to Lead on Low-Income Community Solar*, ENERGY NEWS NETWORK (Aug. 18, 2022).

1 Energy territory on the left (blue). Proceeding to the right within each income bracket, we
2 can see how each sequential intervention, starting with weatherization, then heat pump
3 installation (for non-gas heated homes only under current economic conditions),
4 community solar, and demand response, impacts the energy cost burden distribution when
5 applied to all LMI households in the DTE's territory. At the end, we see that the majority
6 of gas-heated LMI households with incomes above the federal poverty level have energy
7 cost burdens below the six percent threshold. Energy cost burdens are reduced most
8 dramatically for households with incomes below the federal poverty level. However, the
9 vast majority of these households still remain above the six percent threshold after all
10 interventions, despite the much greater proportional decrease in their energy cost burdens.
11 While energy-related measures help reduce energy cost burdens, it is difficult to imagine
12 how such measures alone could accomplish the energy affordability goal for households
13 with incomes less than half of the federal poverty level—only a simultaneous increase in
14 income can do that. All that said, these interventions certainly make energy bills
15 meaningfully more affordable.

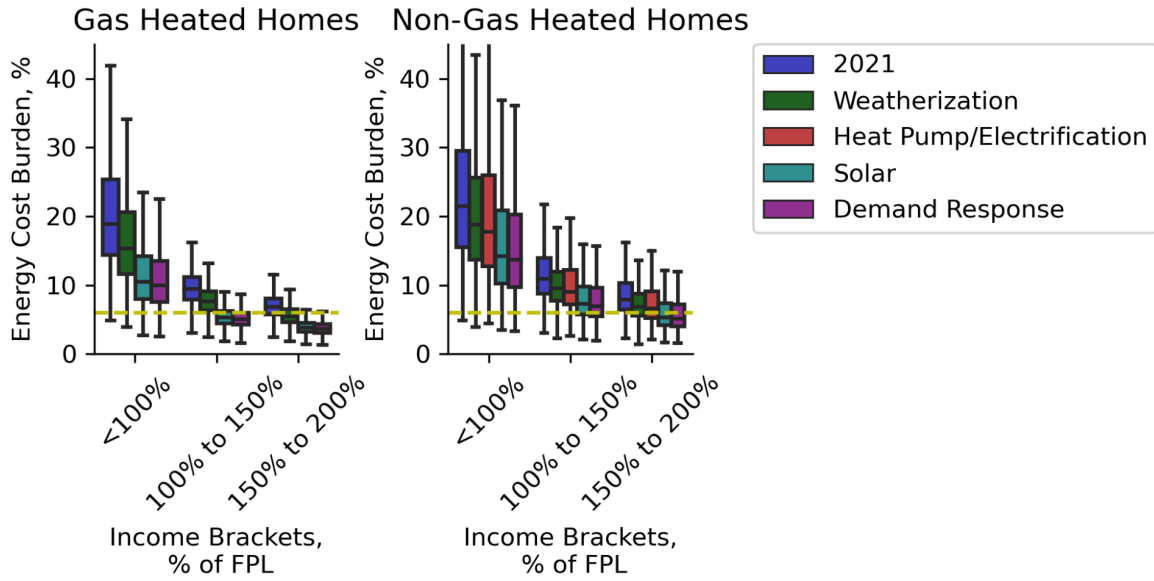


Figure 7: Combined impacts of weatherization, electrification, discounted community solar and demand response on the distribution of energy cost burdens in DTE territory. The horizontal dashed line represents the 6% energy cost burden threshold.

Q: Can you project the evolution of the energy affordability gap if all low-income homes received interventions to lower energy bills by the year 2050? How much would that cost to achieve?

A: In Figure 8, we present a home investment scenario for reducing the energy bills of all LMI households with incomes less than twice the FPL over a period of twenty-five years. The scenario assumes that each year, one out of every twenty-five households in DTE territory receives the suite of interventions described above, with the highest energy-burdened households prioritized first and equal numbers of homes retrofitted each year. This means that by 2050, all LMI households would have their energy bills reduced through clean energy investments and home retrofits.

The gray area in the figure represents how the affordability gap would decrease over time as the energy bills of these homes decrease due to the upgrades. The orange area

is the additional amount of grants needed to pay for the investments in LMI communities. These grants represent the costs *after* contributions from the federal Inflation Reduction Act (IRA) HEEHRA program, for which we have accounted for.²⁴ We estimate the average grant needed is roughly \$7,500 per household, primarily for weatherization, efficiency, and some electrification not covered by the IRA: These grants amount to approximately \$135 million per year to provide no-cost bill-reduction investments for one out of every twenty-five LMI households annually. The black dashed line represents the current \$450 million LMI energy affordability gap, and the blue dotted line represents the funding currently available from all state and federal sources in the form of bill assistance—approximately \$90 million annually.

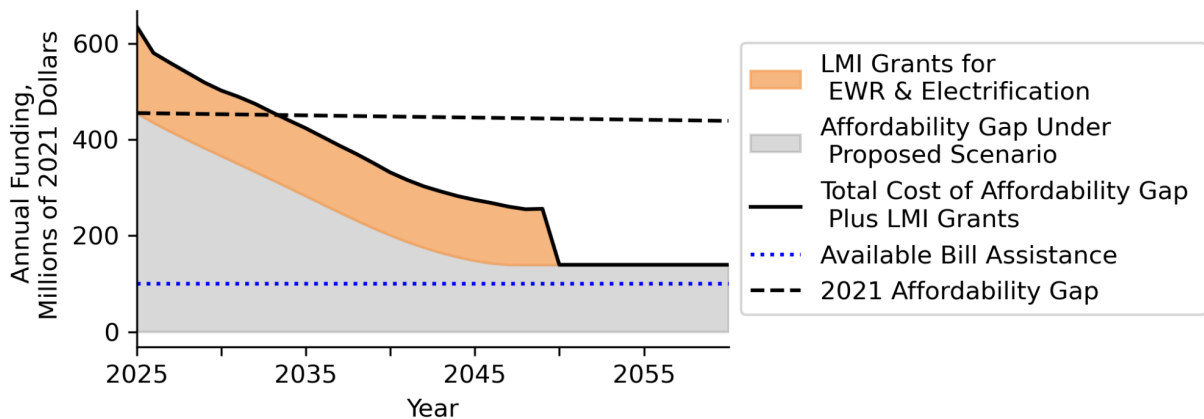


Figure 8: Combined impacts of weatherization, electrification, discounted community solar, and demand response on the cumulative energy cost burdens in DTE territory. This projection only considers households with incomes less than twice the federal poverty level. These figures are not inflation-adjusted.

²⁴ DAO-221. REWIRING AMERICA, *Summary of High-Efficiency Electric Home Rebate Act (HEEHRA)*. We note that rebates for the HEEHRA program are set to expire at the end of 2032. For simplicity, and due to the uncertain nature of funding so far into the future, we assume these grants continue. In the case of their expiration, significantly more funding would need to be directed to financing efficient home electrification.

1 **Q: How can this rate case help finance sustainable home upgrades in LMI households?**

2 **A:** A straightforward way for financing home improvements in LMI households is by securing
 3 additional rate-payer funding for such a program through a dedicated bill surcharge.
 4 Existing funding includes WAP, which in 2022 was roughly \$20 million state-wide.²⁵ I
 5 assume approximately half of that sum, \$10 million, is available for DTE customers. A
 6 further approximately \$50 million is available from DTE EWR programs. Splitting the
 7 \$135 million needed annually for no-cost remediation of households with incomes less
 8 than twice the FPL (minus the roughly \$60 million available through WAP and DTE EWR
 9 programs) among the two million DTE residential customers would add roughly \$3.13 per
 10 month to their energy bills.²⁶ If this were recovered by a rate spread over all residential,
 11 commercial, and industrial sales (roughly 41 million MWh in 2022), this program could be
 12 funded by an additional 0.18 cent/kWh surcharge, roughly one percent of rates in 2022.
 13 Other sources of funding may also exist for this program. This rough calculation also
 14 assumes that the majority of programmatic funding from existing incentives is channeled
 15 directly to LMI customers which may not be the case. Importantly, many of these
 16 investments can pay for themselves over time through a decreased need for bill assistance.

²⁵ See Ex. DAO-222. U.S. Department of Energy, Weatherization Assistance Program PY22 State Plan (Michigan) (excerpt).

²⁶ \$135 million for no-cost remediation of households with incomes less than twice the FPL minus the roughly \$10 million available through WAP and \$50 million for DTE LMI EWR programs equals a remaining gap of \$75 million. Dividing \$75 million by two million DTE residential customers equals \$37.50 per year, which, divided by 12, equals \$3.13 per month.

Q: What are the obstacles due to the distribution of available circuit capacity for Distributed Energy Resources (DER) in EJ communities?

A: Grid infrastructure limitations—specifically, available capacity on existing circuits for DER such as solar photovoltaics—may limit the widespread adoption of residential or community solar, particularly in historically marginalized and environmentally burdened communities. Using the methodology described below and based on data from DTE’s hosting capacity maps,²⁷ I conclude that census tracts scoring at or above the 80th percentile of Michigan’s Environmental Justice Screen²⁸ may have significantly lower than average hosting capacity available (Figure 9). We note that the lowest quintile, less than the 20th percentile, also has lower than average hosting capacity. This indicates a potential need for DTE to prioritize circuit upgrades in historically marginalized communities in order for these communities to interconnect a meaningful number of household or community solar arrays. These results echo findings from Anna Brockway and her colleagues that limits in available grid capacity reduce access to solar—particularly in disadvantaged and black-identifying census block groups—in two major utility territories in California.²⁹

However, this analysis requires further validation as it relies on partially incomplete publicly available data as described below.

²⁷ DTE Hosting Capacity maps available at <https://www.arcgis.com/apps/webappviewer/index.html?id=64e9f4e0f82c42e7b7ed847273ec2764>. Data accessed on June 27, 2024.

²⁸ Michigan Department of Environment, Great Lakes, and Energy EJScreen Data available at <https://gis-egle.hub.arcgis.com/datasets/d8f9a2d819cd428eac2e6423a4886a9b/explore?layer=0&location=44.149606%2C-85.811055%2C6.99>. Data accessed on July 10, 2024.

²⁹ See Ex. DAO-223. Anna M. Brockway et al., *Inequitable Access to Distributed Energy Resources Due to Grid Infrastructure Limits in California*, 6 NATURE ENERGY 892 (2021).

Average available hosting capacity per household by MiEJScreen score

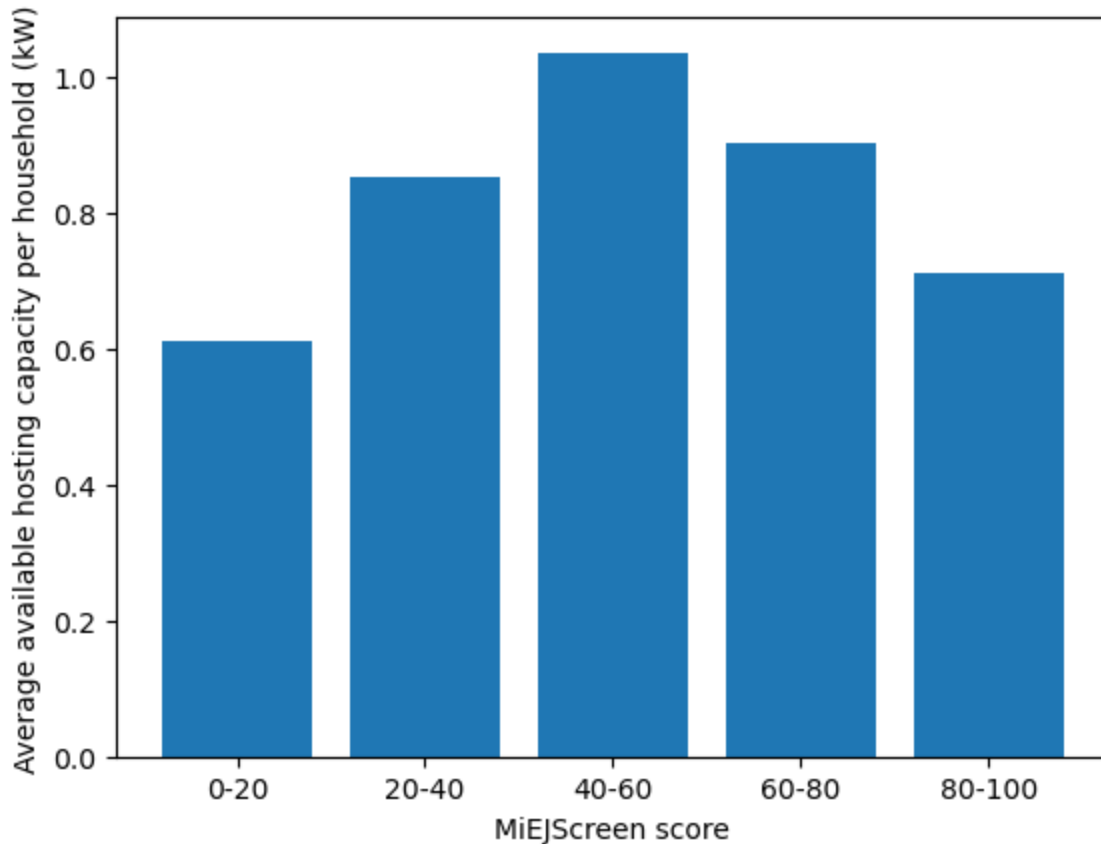


Figure 9. Bar chart of average available hosting capacity per household by Michigan EJ Screen score.

Data for the above Figure 9 was calculated in ArcGIS Pro by computing a union of DTE's distribution circuits and census tracts within DTE's service territory and allocating each circuit's available hosting capacity to the appropriate census tracts, proportional to how much of the circuit was within each tract. To account for tracts only partially served by DTE, the tract's population and total housing units (households) were scaled down to the percentage of tract area within DTE's territory. The total available hosting capacity for each census tract was then summed and divided across the total number of DTE households in that census tract. To adjust for census tracts with few households, the average hosting

1 capacity in each quintile of the MI EJScreen score is an average weighted by the number
2 of households in each tract.

3 For these estimates, capacity was assumed to be evenly distributed across a listed
4 circuit and that all households in a given census tract have access to the summed capacity
5 of that tract. It also does not include the impact of sharing hosting capacity with commercial
6 customers. While reasonable for general tract-level estimates, these assumptions break
7 down at the individual household level, particularly for larger tracts where only a single
8 circuit is listed as having available capacity. The potential of distribution circuit capacity
9 as a barrier to solar adoption is worth further, more explicit study to match circuits to
10 residential households and examine where grid upgrades could be prioritized to enable
11 access to local solar energy in the communities that can most benefit from it.

12
13 **V. Summary and Recommendations**

14 **Q: How would you summarize the findings of the above analysis?**

15 **A:** The findings of the above analysis can be summarized as follows:

- 16 ● Approximately 515,000 households, or roughly 25 percent of DTE's residential
17 customers are energy cost burdened.
- 18 ● DTE's significantly higher-than-average rates require \$480 million in bill
19 assistance annually to close the affordability gap. \$450 million of that value is for
20 households earning less than twice the FPL alone. Roughly \$380 million of that
21 gap is for electricity alone. However, low-income assistance programs are
22 underenrolled and underfunded. Witness Schott outlines recommendations to help
23 make the vital bill assistance programs available to all.

- 1 ● Only roughly 20 percent of this gap can be covered with existing funding for bill
2 assistance. However, if roughly four percent of rates were designated for LMI bill
3 assistance, that would be enough to fund current bill assistance needs.
- 4 ● Targeted investments into homes of those who struggle to pay their bills are cost-
5 effective ways to improve affordability that improve energy equity while also
6 meeting climate goals. These investments are cost-effective in that they offset the
7 need for bill assistance over time but also provide other benefits to homes, such as
8 enabling cooling during increasingly more frequent dangerous heat waves and
9 more and healthier air quality for residents.
- 10 ● Nearly half of cost-burdened households are located in communities in the highest
11 quintile of MI EJScreen score and also in Justice 40 communities. Justice40 helps
12 ensure that funds that help meet climate goals are also in historically
13 disadvantaged communities. As such, targeted bill-reducing investments in
14 homes, such as those discussed here, are one way to ensure climate investments
15 also benefit disadvantaged communities through improved affordability.
16 Moreover, these investments may be coupled with federal funding available for
17 disadvantaged communities, in addition to the HEEHRA program, making them
18 even more cost-effective while also helping to achieve climate goals.
- 19 ● Bill-reducing interventions for all LMI households would nearly eliminate the
20 need for additional bill assistance beyond what is currently available by reducing
21 it by nearly two-thirds. This program, when coupled with other existing
22 incentives, could be financed by roughly one percent of rates to reach all
23 households by the year 2050.

- 1 • This targeted home interventions approach would require giving first priority to

2 LMI households for EWR and fuel switching programs. This goes contrary to the

3 conventional wisdom of waiting for the costs of clean energy technologies and

4 LMI EWR to decline. We have shown here that it is advantageous to invest in

5 energy-burdened households from the get-go if we consider additional societal

6 costs, inclusive of the energy affordability gap and the need for bill assistance to

7 cover it. We note that this analysis excludes societal benefits from these

8 investments such as improved indoor and outdoor air quality, resilience to

9 outages, and grid benefits that would likely make such investments even more

10 cost effective.
- 11 • Not prioritizing LMI households early on would simply push the need for

12 investments in these households further down the line, thus either foregoing

13 energy equity and environmental justice considerations or incurring significant

14 net societal costs in the form of increased bill assistance needed in the long term.
- 15 • Ultimately, addressing the issue of high energy cost burdens is an ethical decision

16 with broad implications for environmental and social justice. In recent years,

17 researchers have worked to develop a conceptual framework for energy justice

18 and energy equity.³⁰ This framework delineates an energy system that distributes

19 the benefits and costs of energy services and resources fairly, corrects for historic

20 and systemic inequities, and contributes to a fully representative and impartial

21 decision-making process. By budgeting for increased investments in EWR,

22 electrification, community solar, and demand response in LMI communities

³⁰ Ex. DAO-224. Benjamin K. Sovacool et al. *Energy Decisions Reframed as Justice and Ethical Concerns*, 1 NATURE ENERGY 1, 1-6 (2016).

1 facing the greatest challenges paying their energy bills, rate cases like the current
2 one can save ratepayers and taxpayers money while supporting a healthier,
3 greener, and more just energy system.

- 4 • Using an income threshold of 150 percent of FPL is likely too low as many
5 customers above that threshold are still cost-burdened. A 200 percent threshold is
6 a better compromise and is also a standard for other LMI programs. Moreover,
7 these protections and programs are missing roughly 69 percent of customers who
8 are currently eligible, so easier enrollment is essential to ensure equitable benefits
9 of low-income programs.

10
11 **Q: Can you sketch a basic framework for how to incorporate energy cost burden and**
12 **energy affordability gap considerations in this and other rate cases under MPSC's**
13 **jurisdiction?**

14 **A:** Eliminating the energy affordability gap would make energy affordable for the vast
15 majority of DTE's customers. Through a rate case, multiple options for reducing the
16 affordability gap exist. One is an income-based bill-assistance plan such as a PIPP under
17 which LMI bills are subsidized. Another option, which should occur simultaneously, is to
18 increase funding greatly for LMI weatherization, electrification, community solar, and
19 demand response through bill adders that specifically support these types of investments
20 in LMI communities. Reliance on PIPP and other energy assistance programs will be
21 reduced over time as overall energy cost burdens decline due to investments in bill-

1 reducing home upgrades. Finally, a lower ROE should be pursued given the fact that
2 DTE residential customers face some of the highest electricity rates in the country.

3 We, thus, make the following recommendations:

- 4 ● Require DTE to track and publish both the electricity affordability gaps and
5 cost burdens using their customer data and to follow how these gaps and cost
6 burdens evolve under both proposed rate plans and programs such as LMI
7 EWR. Such estimates should be broken down geographically by zip code or
8 other suitable geographic areas and by income group, home type, heating fuel,
9 etc. As shown in this testimony, such breakdowns can be done while
10 preserving privacy and are essential to capture the full landscape of energy
11 affordability. These data should be shared in a public tool similar to the data
12 provided for utility shutoffs. Any rate increases should be offset through
13 increased investments to help make bills more affordable, or else the problem
14 will only worsen over time and residential affordability will remain a
15 significant hurdle to electrification, a key component in meeting climate
16 targets.
- 17 ● Implement a PIPP program with straightforward enrollment and self-
18 attestation of income to eliminate the current energy affordability gap within
19 DTE's territory. This would require substantial additional funding in the near
20 term but not in the long term if coupled with investments in LMI home
21 improvements and clean energy adoption.
- 22 ● Investor-owned utilities should additionally publish estimates of zip code or
23 census tract data of outages, affordability, shutoffs, grid capacity, and hosting

1 capacity. These data are essential to informing energy equity as they identify
2 communities where customers are burdened with poor service, unaffordable
3 bills, and limited options for building resilient energy systems that can reduce
4 bills or electrifying to safer, more comfortable homes. These data can further
5 be combined with maps of climate threats such as extreme heat and urban heat
6 islands to inform interventions that can strategically improve both climate
7 resilience and affordability at the same time. DTE claims that this is not
8 possible due to a mismatch between circuits and geographic areas, but
9 methods to do so without revealing private data already exist such as that
10 performed using publicly available data shown in Figure 9. A less optimal
11 alternative would be to report the same statistics for each quintile of the MI
12 EJScreen metric. This option, however, cannot be used identify how
13 individual communities are impacted or to identify areas that are
14 simultaneously challenged by multiple stressors.

- 15 • Facilitate the more rapid adoption of clean energy technologies that can
16 reduce bills for LMI households. This can include pilots for community solar
17 with provisions for minimum LMI participation and expanded demand
18 response options that are easier to participate in when technology or
19 homeownership is an obstacle.

21 **Q: Does this conclude your written Direct Testimony?**

22 **A:** Yes

1 MR. TEMPLETON: Thank you, your Honor.

2 On behalf of the Detroit Area Advocacy Organizations, I
3 move to bind in the Direct Written Testimony of Arjun
4 Makhijani, first name spelled A-r-j-u-n, last name
5 spelled M-a-k-h-i-j-a-n-i. Dr. Makhijani's testimony
6 consisted of one cover page, a table of contents, and 60
7 pages of questions and answers. As part of his written
8 direct testimony, Dr. Makhijani sponsored Exhibits
9 DAO-251 through DAO-291, inclusive, and I move for the
10 admission of those exhibits as well.

11 JUDGE WALLACE: Thank you, Mr. Templeton.

12 Is there any objection to binding in the testimony of
13 Dr. Makhijani?

14 Hearing none, the testimony is bound in.

15 Is there any objection to the admission
16 of Exhibits DAO-251 through DAO-291?

17 Hearing none, those exhibits are
18 admitted.

19 (Testimony bound in.)

20 - - -

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of DTE	)	
ELECTRIC COMPANY for authority to	)	Case No. U-21534
increase its rates, amend its rate schedules	)	
and rules governing the distribution and	)	ALJ Sally L. Wallace
supply of electric energy, and for	)	
miscellaneous accounting authority.	)	

DIRECT TESTIMONY OF ARJUN MAKHIJANI, Ph.D.

ON BEHALF OF

DETROIT AREA ADVOCACY ORGANIZATIONS

(SOULARDARITY AND WE WANT GREEN, TOO)

July 26, 2024

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1 **Introduction and Summary of Qualifications**

2 **Q: Please state your name and business address.**

3 **A:** My name is Arjun Makhijani. My business address is Institute for Energy and
4 Environmental Research, P.O. Box 5324, Takoma Park, Maryland, 20913.

5
6 **Q: By whom are you employed, and in what capacity?**

7 **A:** I am employed by the Institute for Energy and Environmental Research (IEER); I am
8 President of the Institute. IEER is a non-profit that aims to provide the public and
9 policymakers with scientifically sound analysis of energy and environmental issues.

10
11 **Q: On whose behalf are you submitting this direct testimony?**

12 **A:** I am submitting this testimony on behalf of Soulardarity and We Want Green, Too,
13 collectively known as the Detroit Area Advocacy Organizations (DAAO) in this
14 proceeding.

15
16 **Q: Please summarize your qualifications, experience, and education.**

17 **A:** I have a Bachelor of Engineering (Electrical) from the University of Bombay and a Ph.D.
18 from the Department of Electrical Engineering and Computer Sciences from the University
19 of California at Berkeley. I have done consulting work on energy and electricity issues for
20 utilities, including the Tennessee Valley Authority, governmental institutions, including
21 Lawrence Berkeley National Laboratory, several agencies of the United Nations, and the
22 Edison Electric Institute, as well as environmental and community-based organizations. I
23 am a member of the Mitigation Working Group of Maryland Commission on Climate

1 Change, an advisory body established by the State of Maryland. I have testified before the
2 U.S. Congress, served on U.S. federal advisory committees, and been a member of a
3 scientific group providing technical support to the Presidentially appointed Advisory Board
4 on Radiation and Worker Health for the Centers for Disease Control and Prevention's
5 National Institute for Occupational Safety and Health. I have authored or co-authored many
6 studies, papers, reports, and books on energy-related issues over more than fifty years. I
7 am the principal author of the first assessment of the energy efficiency potential of the U.S.
8 economy (1971) as well as a relatively recent assessment of the prospects and costs of a
9 transition to a renewable electricity system in a single state (*Prosperous, Renewable*
10 *Maryland*, 2016). I am also the principal author or co-author of several studies on the
11 energy transition that are centered on energy affordability and equity, including *Energy*
12 *Justice in Maryland's Residential and Renewable Energy Sectors* (2015), *Pathways to*
13 *Energy Affordability in Colorado* (2022), and *Energy Affordability in Maryland:*
14 *Integrating Public Health, Equity, and Climate* (2023). Most recently, I authored *The*
15 *Trouble with STRIDE: Meeting Climate Goals and Addressing Natural Gas System*
16 *Stranded Costs* (2024). My CV is attached as Ex. DAO-251.

17
18 **Q: Have you testified before the Michigan Public Service Commission previously?**

19 **A:** No.

Q: Have you testified or provided comments in similar state or federal regulatory proceedings?

A: Yes. Most recently, in 2022, I provided expert testimony before the North Carolina Utilities Commission regarding the Duke Energy Integrated Resource and Carbon Plans on behalf of the Environmental Working Group. In 2007, I provided expert testimony before the Georgia Public Service Commission on behalf of the Southern Alliance for Clean Energy. I have also provided expert testimony in matters before the Nuclear Regulatory Commission.

Q: Are you sponsoring any exhibits?

A: Yes. I am sponsoring the following exhibits:

DAO-251. Resume of Arjun Makhijani, Ph.D.

DAO-252. MARYLAND PUB. SERV. COMM., *In the Matter of the Potomac Edison Company D/B/A Allegheny Power's Energy Efficiency, Conservation and Demand Response Programs Pursuant to the Empower Maryland Energy Efficiency Act of 2008*, Case No. 9153, Order No. 87082 (July 16, 2015)

DAO-253. National Council on Aging, *Ending Stigma around Receiving Benefits*, (June 1, 2016)

DAO-254. HR Lineup, *Absenteeism in the Workplace: Impact, Causes, Policies & Solutions* (Dec. 19, 2023)

DAO-255. APPRISE, 2011 NATIONAL ENERGY ASSISTANCE SURVEY: FINAL REPORT (Nov. 2011)

- 1 DAO-268. MATTHEW DESMOND, EVICTED: POVERTY AND PROFIT IN THE AMERICAN
2 CITY (2016)

3 DAO-269. Yannai Kashtan et al., *Nitrogen Dioxide Exposure, Health Outcomes, and*
4 *Associated Demographic Disparities Due to Gas and Propane*
5 *Combustion by U.S. Stoves*, 10 Science Advances (May 3, 2024)

6 DAO-270. U.S. Energy Information Administration, EIA Form 861, spreadsheet
7 entitled Sales_Ult_Cust2022, DTE Electric excerpt

8 DAO-271. NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, NORTH
9 CAROLINA CLIMATE RISK ASSESSMENT AND RESILIENCE PLAN (June 2020)

10 DAO-272. Lawrence Berkeley National Laboratory, Interruption Cost Estimate
11 Calculator, available at <https://icecalculator.com/home> (last accessed on
12 July 21, 2024)

13 DAO-273. FOOD AND DRUG ADMINISTRATION, FOOD AND WATER SAFETY DURING
14 OUTAGES AND FLOODS (last accessed on July 12, 2024)

15 DAO-274. Jodi Thornton-O’Connell, *How Much It Costs to Stock the Average*
16 *Family Refrigerator*, GO BANKING RATES (2017)

17 DAO-275. FEDERAL RESERVE BANK, ST. LOUIS ECONOMIC DATA, CONSUMER PRICE
18 INDEX FOR ALL URBAN CONSUMERS: FOOD IN U.S. CITY AVERAGE

19 DAO-276. BOARD OF GOVERNORS OF THE FEDERAL RESERVE, ECONOMIC WELL-
20 BEING OF HOUSEHOLDS IN 2021 (May 2022)

21 DAO-277. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, UNITED STATES
22 BILLION-DOLLAR DISASTER EVENTS 1980-2022 (CPI-ADJUSTED) (Jan. 10,
23 2023)

- 1 DAO-278. Tucker Oddleifson et al., *Prefeasibility Analysis of Behind-the-Meter*
2 *Distributed Energy Resources in Highland Park, MI: Highland Park*
3 *Pathways to Power*, NAT. RENEW. ENERGY LAB. (Mar. 2024)
- 4 DAO-279. Patrick Gibbs, *Housing Characteristics and Energy Burden Analysis for*
5 *Highland Park, Michigan*, NAT. RENEW. ENERGY LAB. (Mar. 2024)
- 6 DAO-280. Erik Pohl et al., *Distribution Grid Impact Study in Highland Park,*
7 *Michigan: Understanding Rooftop Solar, Behind-the-Meter Energy*
8 *Storage, Electric Vehicle Charging, and Building Electrification*, NAT.
9 RENEW. ENERGY LAB. (Mar. 2024)
- 10 DAO-281. Mahkijani NREL-based calculations
- 11 DAO-282. FEDERAL RESERVE BANK, ST. LOUIS ECONOMIC DATA, CONSUMER PRICE
12 INDEX FOR ALL URBAN CONSUMERS
- 13 DAO-283. Rachel Brennan, *Does Home Insurance Cover Spoiled Food from a Power*
14 *Outage?*, Policygenius (May 30, 2024)
- 15 DAO-284. EPA, REPORT ON THE SOCIAL COST OF GREENHOUSE GASES: ESTIMATES
16 INCORPORATING RECENT SCIENTIFIC ADVANCES (Nov. 2023)
- 17 DAO-285. MICHIGAN COUNCIL ON CLIMATE SOLUTIONS, ENERGY PRODUCTION,
18 TRANSMISSION, DISTRIBUTION, AND STORAGE WORKGROUP
19 RECOMMENDATIONS (Oct. 2021)
- 20 DAO-286. MICHIGAN DEPARTMENT OF CLIMATE, GREAT LAKES, AND ENERGY, MI
21 HEALTHY CLIMATE PLAN (April 2022)
- 22 DAO-287. DTE Electric Co., Reliability Performance and Power Quality Resolution
23 Process: DTE Electric Report for 2022 (April 3, 2022)

1 DAO-288. Parker Village ICE calculations

2 DAO-289. Jeff St. John, *Massachusetts Kicks Off First Pilot to Shift Gas Utilities to*
3 *Clean Heat*, CANARY MEDIA (June 4, 2024)

4 DAO-290. REDWOOD COAST RENEWABLE ENERGY AIRPORT MICROGRID, FACTSHEET
5 (Jan. 2020)

6 DAO-291. NREL PVWatts Calculator for Detroit, Michigan scenarios
7

8 **Q: What is the purpose of your testimony?**

9 **A:** My purpose is to examine two issues, one related to affordability and the other to resiliency
10 for communities in the face of worsening weather extremes.

11 With regard to affordability, I examine the costs of unaffordable energy not only to
12 the low- and moderate-income households that experience them but also to non-low-
13 income households, taxpayers, and the public at large. The other side of the cost coin is
14 that by making energy affordable, most of these costs—and especially the most serious
15 ones, such as the loss of housing due to rent-energy bill payment conflicts—can be greatly
16 mitigated and largely or mostly avoided. This analysis will be under the rubric of “non-
17 energy” benefits that need to be taken into account when considering the costs and benefits
18 of making utility bills universally affordable as defined by 6% of gross income.

19 With regard to resilience, I focus on a single aspect—the technical and regulatory
20 requisites for ensuring that continuous power supply is maintained during long outages for
21 critical loads in communities in order to protect their health and well-being.
22

1 **I. Non-Energy benefits of affordable energy**

2 **Q: What are non-energy benefits?**

3 **A:** In the context of evaluating residential energy efficiency investments, experts refer to non-
4 energy benefits, which are the kind of benefits that standard cost-benefit tests such as the
5 Utility Cost Test or even the Total Resource Cost Test do not capture. The Utility Cost
6 Test considers only direct costs and benefits to the utility, such as the cost of rebates and
7 the benefit of reduced fuel costs for electricity generation. The Total Resource Cost Test is
8 broader; it includes utility costs (such as rebates), participant costs (such as the balance of
9 equipment costs not covered by rebates and incentives), utility benefits (such as reduction
10 of fuel purchases for electricity generation and reduction of variable operation and
11 maintenance costs), and reduction in participant energy bills.

12 However, the costs and benefits are much broader than those captured by these two
13 tests. For the participants, they include a more comfortable home and better health. The
14 argument for including non-energy benefits experienced by participants is that when their
15 share of the costs is included, all of the benefits they experience, whether in their energy
16 bills or otherwise, should also be included. Similarly, when the public share of cost (via
17 ratepayers or taxpayers) is included, the public (or social) benefits, such as reduced
18 pollution-associated health benefits, should also be factored into the accounting.

19 For instance, in Order No. 87082 (2015), the Maryland Public Service Commission
20 ordered non-energy benefits to be included in considering whether investments in
21 efficiency are justified—that is whether the benefit-to-cost ratio is greater than one. The
22 order referred to this broader test including non-energy benefits as the “Societal Cost Test.”
23 (The Maryland Commission also maintained the most customary Total Resource Cost Test

1 to enable continued comparison with other states that continue to rely on it.) A “failure” to
 2 include non-energy benefits skews decision-making, the Commission concluded, and
 3 would “ignore the codified intent of the General Assembly ‘to provide affordable, reliable,
 4 and clean energy for consumers of Maryland.’”¹

5 In this view, taking non-energy benefits is integral to the regulatory process and to
 6 achieving its goals. It is even more so in the context of the energy transition and worsening
 7 climate extremes with their impacts on ratepayers and society.

8
 9 **Q: How do non-energy benefits apply to affordability issues?**

10 **A:** When considering how non-energy benefits apply to affordability issues, the concept of
 11 calculating costs and benefits remains exactly the same as that explained above for energy
 12 efficiency.

13 Making energy bills affordable for low-income households entails costs. These
 14 include the cost of direct assistance needed to lower energy bills that may be borne by non-
 15 low-income ratepayers, for instance. Some costs come via the federal Low-Income Home
 16 Energy Assistance Program (LIHEAP); these costs should also be included.

17 Making energy bills affordable for low-income households also brings benefits.
 18 Ratepayers would get some benefits since the number of utility bill defaults—which
 19 ratepayers must cover—would tend to decline, offsetting a part of the assistance costs.
 20 Assistance recipients would benefit by being better able to balance their household budgets
 21 for paying the rent or mortgage and for purchasing food and medicines. They would also

¹ Ex. DAO-252. MARYLAND PUB. SERV. COMM., *In the Matter of the Potomac Edison Company D/B/A Allegheny Power’s Energy Efficiency, Conservation and Demand Response Programs Pursuant to the Empower Maryland Energy Efficiency Act of 2008*, Case No. 9153, Order No. 87082 (July 16, 2015) at 5–6.

1 be more secure in their homes by the simple fact that electricity shutoffs would be far less
2 likely and far less frequent. Keeping the electricity on is a requirement of many rental
3 contracts; this means that electricity shutoffs put many renters at risk of eviction.

4 As explained in the testimony of Witness Kinkhabwala,² energy affordability can
5 be improved by a variety of investments, including building envelope improvements,
6 electrification of heating with high-efficiency heat pumps, demand response infrastructure,
7 and community solar at prices lower than residential rates. The investments represent costs,
8 which are borne by some combination of taxpayers, ratepayers, and low- and moderate-
9 income households. If the entire cost side of the ledger is included, the entire benefit side
10 should also be included.

11 As with efficiency investments, there are several parties that benefit from
12 affordability investments, including those who receive assistance and investment
13 incentives; utilities, whose bills are paid more regularly and completely; ratepayers,
14 because of reduced utility costs; mortgage providers, because of fewer defaults on loans;
15 and state and federal taxpayers, because of fewer emergency room visits, reduced costs of
16 shelter for those who become unhoused, etc.

17 Investments to structurally reduce bills also have more subtle but critically
18 important non-energy benefits. Securing sufficient funding for low-income assistance
19 programs is generally difficult; the amounts required to make energy bills universally
20 affordable by assistance alone are about five times the presently available funds.³ In
21 addition, participation in energy bill assistance programs, including LIHEAP, is often low.
22 There are many reasons for this; one frequent reason is the stigma associated with receiving

² See generally Kinkhabwala Direct Testimony.

³ *Id.* at 12 (fig.2), 29 (fig.8).

1 financial assistance. For instance, the National Council on Aging found that “[t]he primary
 2 consequence of stigma is that low-income older adults do not apply for public benefits for
 3 which they are eligible, thereby foregoing a crucial form of financial assistance, which can
 4 impact levels of debt and, ultimately, their health and independence.”⁴ Investments that
 5 systematically lower energy bills significantly reduce the need for assistance to achieve the
 6 6% affordability threshold. Through a suite of these investments, the number of LMI
 7 households that are customers of DTE Electric that pay more than 6% of their income for
 8 energy could be reduced from 430,000 to 240,000, and simultaneously the annual need for
 9 bill assistance would be reduced from \$450 million (for households below 200% of the
 10 poverty level) to just \$140 million.⁵

11
 12 **Q: What are the specific non-energy benefits of affordable energy bills?**

13 **A:** These benefits are of two types. First, there are avoided costs; and second, there are positive
 14 benefits. Avoided costs to low-income households include the avoided costs of ill-health
 15 and of becoming unhoused, which happens by reducing conflicts over payments for
 16 essentials such as rent, medicines, food, and utility bills. Avoided costs to society include
 17 avoided costs of shelter for the unhoused, avoided costs of added emergency room visits,
 18 and avoided increases in taxes and health insurance premiums that these imply. Second,
 19 there are the positive benefits of better health, such as increased productivity for low-
 20 income persons at school and at work; these accrue both to the low-income persons
 21 themselves and to society at large.

⁴ Ex. DAO-253. National Council on Aging, *Ending Stigma Around Receiving Benefits* (June 1, 2016).

⁵ Kinkhabwala Direct Testimony at 26.

1 **Q: Can you quantify the non-energy benefits of affordable energy?**

2 **A:** Quantifying non-energy benefits requires, first of all, an estimate of the costs in the absence
 3 of affordability. Some of the more important ones, such as the cost of shelter and added
 4 emergency room visits for those who become unhoused, can be approximately quantified.
 5 Calculating the benefits requires an estimate of the amount by which these costs would be
 6 reduced were energy cost burdens reduced to 6% or less of gross income. There is far less
 7 data on this; nonetheless, order of magnitude estimates of some of the most important non-
 8 energy benefits, such as reduced costs of added emergency room visits, can be made. Some
 9 positive benefits are even more difficult to estimate, such as higher productivity at work
 10 due to better health, since the needed survey data do not exist, to the best of my knowledge.
 11 High energy burdens create more ill-health; in turn, financial difficulties and ill-health are
 12 among the causes of absences from work.⁶ Hence, reducing ill-health by reducing the
 13 conflicts between buying medicines and paying energy bills will likely result in higher
 14 productivity. It is not possible to quantify this benefit at present. It is one of my
 15 recommendations that the Commission take action to improve and make more
 16 comprehensive data on non-energy benefits of affordability, including this benefit to
 17 employees and employers.

18
 19 **Q: Please provide some examples of non-energy costs of unaffordable energy bills.**

20 **A:** Examples include keeping a home at an unsafe temperature; using a stove or oven to
 21 provide heat; having electricity or natural gas cut-off; losing a home and moving in with
 22 friends or family; losing a home and becoming unhoused and moving to shelter; not filling

⁶ See generally Ex. DAO-254. HR Lineup, *Absenteeism in the Workplace: Impact, Causes, Policies & Solutions* (Dec. 19, 2023).

1 prescriptions fully; going without medical or dental care; and going without food for at
2 least one day, among others.

3 The National Energy Assistance Directors Association publishes a report
4 containing survey data on these non-energy costs for the years 2011 and 2018.⁷ The
5 households surveyed are those that received LIHEAP assistance at least once in the five
6 years prior to the survey. Data are for the year prior to the survey, except as indicated,
7 where I have annualized five-year data for uniformity of presentation.
8

⁷ Ex. DAO-255. APPRISE, 2011 NATIONAL ENERGY ASSISTANCE SURVEY: FINAL REPORT (Nov. 2011);
Ex. DAO-256. APPRISE, 2018 NATIONAL ENERGY ASSISTANCE SURVEY, FINAL REPORT (Dec. 2018).

Table 1: Non-energy costs of unaffordable energy among LIHEAP-assistance recipients (based on surveys conducted in 2011 and 2018 regarding the year prior to the survey, except as noted)

Impacts	% in 2011 ⁸	% in 2018 ⁹	Comments
Kept home at unsafe temperature*	23	25	Increases ill-health among the vulnerable, such as older people
Used stove or oven to provide heat*	33	30	Increases indoor air pollution
Had electricity or natural gas cut-off*	11	15	Cut-off of electricity can result in violation of rental contracts and the threat of eviction
Lost home and moved in with friends or family**	2.8	3.4	Potential increase in costs to get to work and school; potential loss of jobs and change in school district; potential crowding and other negative social consequences
Lost home and became unhoused and moved to shelter**	0.8	1.2	Decline in life-expectancy if homelessness becomes chronic; increase in shelter costs to taxpayers, increase in health costs hospitals
Did not fill prescription fully**	6.8	6.2	
Went without medical or dental care**	7.4	8.2	
Went without food for at least one day**	5.8	7.2	
Notes: * indicates information from prior year ** indicates information from annual average of the five years prior to the survey			

This data shows a remarkable consistency over time in the harms experienced by low- and moderate-income families. It is important to keep in mind that these families received assistance *at least* once in the five years prior to the survey, so that their energy cost burdens were reduced at least once during that period.

⁸ Ex. DAO-255 at i-iii.

⁹ Ex. DAO-256 at i-iii.

Q: Can you provide some cost in dollars that would go into a societal cost test in estimating the cost of unaffordable energy on a statewide basis?

A: I will illustrate the costs of becoming unhoused in cases where families do not have recourse to the homes of family or friends. Nationally, this affects on the order of one percent of LIHEAP recipients (see Table 1 above). Most of these would be renters, but some would also lose homes they own because of foreclosures.

While I will focus on the quantification of the public costs below, I want to acknowledge at the start that becoming unhoused also has immediate and long-term financial and generational impacts on those who lose the homes that they own. It means loss of the equity in the home, i.e. the market value of the home minus the mortgage amount. It means a loss of financial security down the road since the family cannot refinance or borrow against the equity in the home in times of need. Future generations lose the possibility of inheriting that wealth. These effects can be catastrophic for low-income persons, families, and communities.

Apart from the harm to the family that loses their home, there are a variety of public costs associated with caring for the unhoused. I consider two costs in detail: (i) costs of shelter and (ii) cost of added medical care.

First, in 2010, the federal Department of Housing and Urban Development (HUD) examined the costs of three different types of shelter—emergency shelter, transitional housing, and permanent supportive housing—in three cities (Washington, D.C., Houston (TX), and Kalamazoo (MI)) and one region (Upstate South Carolina).¹⁰ Table 2 shows the

¹⁰ See generally Ex. DAO-257. BROOKE SPELLMAN ET AL., COSTS ASSOCIATED WITH FIRST-TIME HOMELESSNESS FOR FAMILIES AND INDIVIDUALS (March 2010).

HUD cost estimates updated to 2021 dollars¹¹ using the Bureau of Labor Statistics rent cost index for all rental housing.¹²

Table 2: Department of Housing and Urban Development Shelter Cost estimates for first-time homeless families, 2021 dollars per month

Family Sites	Emergency Shelter	Transitional Housing	Permanent supportive housing	2006 Fair Market Rent for Two-bedroom Unit ^b
Washington, D.C.	\$3,519 - \$5,214	\$3,026 - \$3,085	\$1,764	\$1,727
Houston	\$1,961	\$2,735 - \$6,320	\$1,127	\$1,048
Kalamazoo	\$2,276	\$1,146	\$1,242	\$863
Upstate South Carolina	\$3,199	\$1,705	\$932	\$845 (Greenville Metro)

For the purposes of this testimony, I assume:

- That families would be in some mix of shelters over time. Costs of such shelters are higher in large cities, but those needing shelters may be in a wider range of areas. A mix of urban and rural may be better represented by Kalamazoo, which happens to be in Michigan.
- In a prior study, my colleagues at IEER and I found that the typical duration of homelessness could be about seven months, though the duration would be expected to vary significantly.¹³

Multiplying the average cost of the three shelter arrangements for two unhoused persons in Kalamazoo (about \$1,560 per month) times the typical duration of homelessness

¹¹ Unless otherwise stated, all dollar values in my testimony are in 2021 dollars. This is for the sake of consistency with the resilience calculations, for which I have drawn on National Renewable Energy Laboratory calculations for solar photovoltaic costs, which are in 2021 dollars. The affordability values drawn from Witness Kinkhabwala's testimony are also in 2021 dollars.

¹² Ex. DAO-258. Bureau of Labor Statistics, New Tenant Rent Index (Jan. 16, 2024).

¹³ Ex. DAO-259. ARJUN MAKHIJANI ET AL., ENERGY JUSTICE IN MARYLAND'S RESIDENTIAL AND RENEWABLE ENERGY SECTORS (Oct. 2015) at 164.

(seven months) would bring a typical housing cost to taxpayers and non-profits per homeless event of about \$10,900 (rounded).

Second, healthcare expenditures also rise; the rise in emergency room visits relative to housed low-income households is largely responsible for the increase in costs. Careful estimates are available for this specific population from a non-profit called Boston Health Care for the Homeless Program (website: <https://www.bhchp.org/>); it is dedicated to quality health care for the homeless. A study compared people with housing with MassHealth insurance, which is the Medicaid and Children's Health Insurance Program in Massachusetts. Most unhoused people, as well as low-income people with housing, are eligible for MassHealth.¹⁴ Their central finding pertinent to added non-energy costs of becoming unhoused was as follows:

“Homeless individuals had high health care expenditures—\$2,036 per member per month compared with \$568 per month for all MassHealth members. Almost half of total annual expenditures were incurred by 10% of the study population.... The 2 highest categories of health care expenditure were hospitalizations and ED [Emergency Department] visits, which represented 40% and 11% of total expenditures, respectively.”¹⁵

Adjusting for health care inflation by a factor of 1.24 between 2013 and 2021 using the urban health care Federal Reserve index,¹⁶ the cost increment for unhoused persons as

¹⁴ Ex. DAO-260. Monica Bharel et al., *Health Care Utilization Patterns of Homeless Individuals in Boston: Preparing for Medicaid Expansion Under the Affordable Care Act*, 103 AMERICAN J OF PUB. HEALTH 311 (Dec. 2013).

¹⁵ *Id.* at 314.

¹⁶ Ex. DAO-261. FEDERAL RESERVE BANK, ST. LOUIS ECONOMIC DATA, CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS: MEDICAL CARE IN U.S. CITY AVERAGE.

1 compared to housed persons for two individuals for seven months would be about \$25,400
2 in 2021 dollars.¹⁷

3 Combining the incremental healthcare costs with shelter costs yields a total cost
4 increment per homelessness event of about \$36,000 (rounded).¹⁸

5 In the five years from 2019 to 2023, inclusive, an average of 161,300 households
6 received LIHEAP assistance in Michigan.¹⁹ Based on the survey results presented in Table
7 1 above showing that about one percent of them become unhoused each year (average of
8 2011 and 2018 surveys),²⁰ the annual costs of shelter and added medical care would total
9 about \$58 million, based on the above estimates (2021 dollars).²¹ About 31% of
10 Michiganders who are eligible receive LIHEAP assistance.²² If the rate of becoming
11 unhoused for non-participants is the same as that for participants, then the total non-energy
12 costs statewide for these two items would be about \$190 million per year (rounded).²³

14 **Q: Can you estimate these two non-energy costs for the DTE service territory?**

15 **A:** Yes, that can be approximately done.

¹⁷ The per person per month added cost for the unhoused = \$2,036 - \$568 = \$1,468, which translates into \$1,814 in 2021 dollars. This gives the added cost for two unhoused people for seven months of \$1,814 * 7 * 2 = \$25,400 (rounded).

¹⁸ \$10,900 in incremental housing costs plus \$25,400 in incremental health costs equals approximately \$36,000.

¹⁹ Ex. DAO-262. LIHEAP, Data Warehouse Custom Tables Tool (custom report for Michigan), available at https://liheappm.acf.hhs.gov/datawarehouse/custom_reports. 31% of eligible households receive LIHEAP * 520,451 households that qualify for LIHEAP under Michigan definitions equals 161,340 households, or approximately 161,300 households.

²⁰ See Ex. DAO-255; Ex. DAO-256.

²¹ \$36,000 per incident of homeless times 1% of 161,300 households equals approximately \$58 million.

²² Ex. DAO-262.

²³ If the rate of becoming unhoused for non-participants is the same as that for participants, and if \$58 million represents the costs of 31% of the affected population, then approximately \$190 million represents the costs of 100% of the population. (\$58 million / 0.31 = \$187.3 million.)

Michigan, as a whole, has 5.04 million electricity customers, 89% of whom are residential customers.²⁴ DTE has 2.3 million customers in all,²⁵ or about 46% of the Michigan total.²⁶ A very approximate method for the DTE territory would be to attribute 46% of the non-energy costs to the DTE territory—about \$87 million per year.²⁷

However, there would be wide variations of this cost, depending on income and the number of LIHEAP-eligible households. One measure of this unevenness is the rate of eviction notices per 100 renters per year. The rate of eviction notices to renters in Michigan as a whole in 2018 was 16.7%, while that in Wayne County was 22.6%, about a third higher than the statewide level.²⁸ Of course, there are also wide disparities in Detroit itself since eviction notices would be expected to be concentrated in areas with larger proportions of low-income renters. Similarly, the proportion of homeowners who lose their homes to foreclosure would be larger in the same areas.

Taking these factors into account, it is likely that the share of Michigan costs attributable to DTE territory is likely to be significantly larger than 46%. To adjust the DTE total very approximately, I have used the ratio of Wayne County eviction notices to that in the whole state, which is 1.36, to get an estimate of \$120 million per year for these two non-energy costs of unaffordable energy.²⁹ More precise estimates should be a major objective of policy and ratemaking, as I discuss in my recommendations below.

²⁴ Ex. DAO-263. U.S. Energy Information Administration, State Electricity Profile for Michigan, at 15 (tbl. 8).

²⁵ Ex. DAO-264. DTE Energy Co., Annual Report (Form 10-K) (Feb. 8, 2024).

²⁶ 2.3 million divided by 5.04 million equals 45.6%, or approximately 46%.

²⁷ Approximately \$190 million in annual non-energy costs quantified above times 46% equals approximately \$87 million.

²⁸ Ex. DAO-265. Princeton Eviction Lab, Michigan and Wayne County 2018 reports at 4, 8.

²⁹ \$87 million times the 1.36 ratio of Wayne County eviction notices to that in the whole state equals approximately \$118.3 million, or approximately \$120 million.

1 **Q: What about non-energy costs to the customers who become unhoused?**

2 **A:** The above discussion quantifies the costs to the larger society, including taxpayers,
3 hospitals, and insurance companies (and hence to those who pay health insurance
4 premiums). The costs to the customers who become unhoused themselves are in addition
5 to social costs and need to be added to the above total. For instance, becoming unhoused
6 may result in the loss of jobs and income. That, in turn, raises social costs due to loss of
7 economic output and wage-related taxes to the federal, state, and local governments.

8 While I am not aware that these costs have been estimated for low- and moderate-
9 income households in the context of unaffordable energy, data do exist on employment
10 among both the sheltered and unsheltered homeless population. In an extensive survey
11 involving 140,000 people, Meyer and others found “that a substantial share of the homeless
12 population is drawn from the ranks of the working poor: about half of those in shelters and
13 40 percent of those at unsheltered locations had formal employment in 2010.”³⁰ They also
14 found that the jobs are held intermittently and the annual incomes are low. Among the
15 sheltered homeless who have jobs and the poor who are housed, the annual income
16 difference in 2016 was found to be \$6,240 (in 2018 dollars), or about \$6,730 in 2021
17 dollars.³¹

18 On this basis, the annual loss of income among the estimated 1,613 LIHEAP
19 recipients who become unhoused would be about \$11 million a year and roughly \$35
20 million for all LIHEAP-eligible Michiganders (rounded), assuming the same rate of home

³⁰ Ex. DAO-266. Bruce D. Meyer, et al., *Homelessness and the Persistence of Deprivation: Income, Employment, and Safety Net Participation* (Feb. 2, 2024) at 3.

³¹ *Id.* at 38 (derived from tbl.2a).

1 loss as documented in the LIHEAP surveys cited above.³² Roughly half of that, or \$16
2 million per year, would be in DTE territory.

3 In addition, loss of equity in homes that are foreclosed due to energy bill-mortgage
4 payment conflicts should be added to customer costs. I do not have a quantitative estimate
5 for these costs, which may well be substantial.

6
7 **Q: Can all these non-energy costs be attributed to unaffordable energy?**

8 **A:** No. Loss of homes is a complex phenomenon; people lose their homes for a variety of
9 reasons, with poverty looming large among those causes. Financial stresses include
10 conflicts between housing costs, utility bills, food costs, and costs of medicines;
11 unexpected loss of a job or unexpected expenses such as the breakdown of a car necessary
12 for commuting to work also play a role in some cases. Nonetheless, it is clear that financial
13 stresses on low- and moderate-income households centrally involve conflicts between
14 paying the rent or mortgage and paying utility bills—which is why utility bills and housing
15 costs are considered together in the definition of affordable housing by the federal
16 Department of Housing and Urban Development.³³ Further, rental contracts often include

³² 1,613 persons based on the survey data that indicates approximately 1% of approximately 161,300 Michigan LIHEAP recipients become unhoused. *See* discussion *supra* notes 19 and 20. 1,613 persons times \$6,730 in approximate income difference equals \$10.8 million, or approximately \$11 million. \$11 million divided by 31% of Michiganders who are eligible receive LIHEAP assistance, see Ex. DAO-262, equals approximately \$35.48 million or approximately \$35 million for the state of Michigan. \$35 million times 46%, see *supra* note 26, equals \$16.1 million, or approximately \$16 million for the DTE territory.

³³ Ex. DAO-267. U.S. DEPT. OF HOUSING AND URBAN DEVEL., GLOSSARY OF TERMS TO AFFORDABLE HOUSING at 2.

1 clauses that require electricity connections to be maintained; disconnection can become a
2 cause for eviction.

3 There is also direct evidence that the inability to pay utility bills and the inability to
4 pay rent are connected. Matthew Desmond, who leads the Eviction Laboratory at Princeton
5 University, documented that connection in his study of evictions in Milwaukee. Many low-
6 income households defer paying utility bills in the winter when there is a moratorium on
7 utility shutoffs. Bills pile up by the time the moratorium ends in the spring. In turn, forced
8 to pay large, accumulated utility bills, many can no longer afford to pay rent and these
9 accumulated bills simultaneously. As a result of this dynamic, summer becomes a
10 foreseeable season of increasing evictions.³⁴

11 There is also positive evidence of the connection between mortgage payments and
12 utility bills. This is indicated by the results of a pilot project that took a whole-home
13 approach to retrofitting in Baltimore homes of low-income homeowners. The program
14 went beyond efficiency and weatherization and included home safety, indoor
15 environmental improvement, and health risk reduction (such as abatement of lead) for the
16 580 houses that were involved. Before the program, 49 of the participating homeowners
17 had received 57 foreclosure notices, with some owners receiving more than one notice.
18 After the work was completed, only 6 homeowners got 7 foreclosure notices.³⁵ This 88%
19 reduction in foreclosure notices involved a reduction of energy bills,³⁶ and hence energy

³⁴ Ex. DAO-268. MATTHEW DESMOND, EVICTED: POVERTY AND PROFIT IN THE AMERICAN CITY, 15-16 (2016).

³⁵ See Ex. DAO-259 (discussing the Green and Healthy Homes Initiative) at 166.

³⁶ 57 foreclosure notices before minus 7 foreclosure notices after, divided by 57 foreclosure notices before equals 87.8%.

1 cost burdens, via efficiency investments. But it did not include increased energy bill
2 assistance.

3 In sum, while the loss of homes has many causes, it is reasonable to assume that a
4 large fraction involves rent/mortgage payment conflicts with utility bill payments. The
5 other side of the coin is that making utility bills affordable has the prospect of greatly
6 reducing these conflicts and related non-energy costs. It is not possible to estimate
7 accurately the number of evictions or foreclosures that would be avoided, but the evidence
8 cited above, indicates that it is likely to be large. Arriving at more accurate estimates of the
9 non-energy benefits in this area (and other regards) for better policy-making is one of my
10 recommendations.

11
12 **Q: What about the non-energy costs resulting from those who become unhoused but find**
13 **shelter with family or friends, and are therefore not counted as unhoused?**

14 **A:** The customers and the families or friends they move in with experience real costs, such as
15 crowding and social adjustment. There may also be increased transportation costs,
16 dislocation from neighborhood and community, change of schools, and ill-health arising
17 from crowding. Some of the people who move in with friends and family may eventually
18 also become homeless. It is difficult to quantify these costs. Even if the per-family financial
19 costs are smaller than for those who become unhoused, the number of families is larger.
20 As reflected in the LIHEAP surveys, roughly three-fourths of those who lost their homes
21 move in with friends and family (see Table 1 above), a ratio that was about the same in
22 2011 as it was in 2018.

1 **Q: Can you characterize some of the other non-energy costs?**

2 **A:** The inability to fill prescriptions fully or visit a doctor on time can exacerbate diseases,
 3 increase time lost from work, and increase the cost of treatment. Table 1 above shows that
 4 in the five years prior to the 2018 survey, about seven times as many households
 5 experienced the inability to visit doctors or dentists as were rendered unhoused and about
 6 five times as many could not fill prescriptions fully. Such problems increase the intensity
 7 of ill-health, increase the costs of health care, and increase emergency room visits. Thus,
 8 even if the rate of added medical expenses per household is lower for those who remain
 9 housed as compared to those who become unhoused, the number of households
 10 experiencing the increased problems is far larger.

11 The increased ill health caused by the use of gas stoves and ovens in about one-
 12 third of the homes of LIHEAP assistance recipients (see Table 1 above) must also be
 13 factored into the health cost equation. Such use of stoves and ovens increases indoor air
 14 pollution—including carbon monoxide, nitrogen dioxide, particulates, and benzene (from
 15 leaks of unburned gas)—aggravating or leading to a variety of diseases and health risks,
 16 including premature births and respiratory diseases. Moreover, African American,
 17 Indigenous, and Hispanic households and people who live in smaller homes suffer
 18 significantly greater exposures.³⁷ These health problems would all be aggravated by the
 19 use of gas stoves and ovens or portable fossil fuel heaters for heating. Ill health also leads
 20 to loss of work time and income. A full quantitative accounting would include these costs.

³⁷ Ex. DAO-269. Yannai Kashtan et al., *Nitrogen Dioxide Exposure, Health Outcomes, and Associated Demographic Disparities Due to Gas and Propane Combustion by U.S. Stoves*, 10 Science Advances (May 3, 2024) at 10.

Overall, it is reasonable to assume that the order of magnitude of added health costs by the large majority who remain in their homes is likely to be similar, and possibly greater, than for the minority that becomes unhoused.

Q: Are the non-energy costs of unaffordable energy restricted to the Michigan LIHEAP-eligible population?

A: No. The vulnerable population is far larger. The above estimates are based on the LIHEAP-eligible households by the criteria of the State of Michigan. That number averaged 521,451 in the 2019 to 2023 period (inclusive).³⁸ Federal LIHEAP criteria are more expansive and include more moderate-income households; states that administer the program are allowed to set more stringent eligibility criteria, and Michigan, like many other states, has done so. Were Michigan to adopt the federal criteria, the eligible population averaged over the same period would have been 1,136,860—more than double the state’s eligible households.³⁹ Michigan actually used the federal criteria until 2002. Then the state tightened the criteria. Witness Kinkhabwala’s analysis shows that there are about 180,000 households with incomes above the threshold of 150% of the federal poverty level who have energy bills above 6% of gross income.⁴⁰ His analysis also shows that most of the one- to two-thousand DTE customers who are disconnected each week are not assistance recipients.⁴¹ Non-energy costs should be increased to include these households.

This is more than an academic matter of numbers. Disconnections are linked with evictions in rental contracts, as noted above. Thus, the inability to pay utility bills, which

³⁸ Ex. DAO-262.

³⁹ *Id.*

⁴⁰ Kinkhabwala Direct Testimony at 12 (fig.1).

⁴¹ *Id.* at 17 (fig.5).

1 eventually leads to disconnections, is structurally related to the problem of evictions. But
2 simple extrapolation of the number of people who might become unhoused in the ineligible
3 population would likely overestimate the numbers, since some of those who are
4 disconnected are not eligible for assistance and have higher incomes than those who are.
5 Thus more study is required to estimate these non-energy costs.
6

7 **Q: Please discuss the non-energy benefits of making investments to systemically reduce**
8 **the energy bills of low- and moderate-income households.**

9 **A:** The biggest direct benefit is that the investments reduce the amount of energy bill
10 assistance needed to make energy universally affordable for all households. While there is
11 approximately \$90 million per year in currently available assistance funds,⁴² Witness
12 Kinkhabwala's analysis indicates a total affordability gap in the DTE territory of about
13 \$400 million for households eligible for assistance (i.e. household income less than 150%
14 of FPL) and \$485 million including those not eligible (i.e. household income 150% of FPL
15 or above).⁴³ Figure 8 in Witness Kinkhabwala's testimony shows that as a result of
16 investments in energy efficiency, community solar, and demand response, the costs of
17 assistance costs of universal affordability will decline to about \$140 million per year by
18 2050.⁴⁴
19

⁴² *Id.* at 9.

⁴³ *Id.* at 12 (fig.2).

⁴⁴ *Id.* at 26, 31 (fig.8).

1 **Q: Can you sum up your discussion of non-energy costs of unaffordable bills and the**
2 **benefits of making them universally affordable?**

3 **A:** Yes. While exact estimates are not at present possible, it is safe to say that non-energy costs
4 to society, including taxpayers and ratepayers, of unaffordable energy are likely to be of
5 the same order of magnitude in the DTE service territory as the costs of assistance needed
6 to make energy affordable; they may even be considerably greater when costs such as lost
7 home equity and the costs of ill-health and lost income are more comprehensively included.
8 Over time, as investments are made in building envelope improvements, community solar,
9 demand response, and efficient electrification of heating, the need for assistance will
10 decline. About a quarter of a million households who are energy-cost-burdened today will
11 no longer need it because their bills will have become affordable due to the investments to
12 reduce them.

13
14 **Q: How should non-energy benefits be factored into this rate case?**

15 **A:** This is, at once, a very simple and a very difficult question.

16 On the one hand, given that the principle of factoring in non-energy benefits is
17 accepted for efficiency improvements in utility regulatory proceedings and that exactly the
18 same economic principles and reasoning apply to the issue of universal affordability, there
19 is a case for factoring in the costs of assistance and investments into rate cases. This is also
20 an approach that is available to the Commission. But other approaches may be more
21 equitable, such as progressive income taxes, or taxing the corporations that would benefit
22 most, such as health insurance companies and hospitals that would have fewer
23 uncompensated emergency room visits, or hedge funds that own large numbers of rental

units which would recover rent more regularly and have lower turnover of tenants. If rates are the vehicle for funding the gap, it should be as an operating cost on all electricity sold, rather than only on residential electricity, given that a wide variety of non-low-income entities benefit. Overall, the affordability gap for the electricity portion alone in the DTE territory is about \$380 million per year. Factoring out existing assistance, an additional \$304 million would be needed to make electricity affordable for all DTE customers.⁴⁵ If the funds are raised via rates, the rate increase, based on 2022 sales to all ultimate customers, the rate increase would amount to 0.743 cents per kilowatt-hour,⁴⁶ which would amount to about \$4.80 per month for the average residential bill in DTE territory.⁴⁷ The approach to and recommendation regarding financing this gap, as well as some other issues related to rates in this proceeding, are discussed in Witness Koeppel's testimony.⁴⁸

Q: Why do you think the benefits might be even greater than those estimated by Witness Kinkhabwala?

A: The analysis of Witness Kinkhabwala as discussed above reflects reasonable short-term benefits and ensures that the bill reductions will not be overestimated, but I believe the benefits of demand response can grow even more over time. In the longer term, with universal broadband and internet-enabled appliances and electric vehicles, the scope will

⁴⁵ *Id.*

⁴⁶ DTE data regarding total sales to ultimate customers, residential sales, number of residential customers, and total number of customers are from Ex. DAO-270, U.S. Energy Information Administration, EIA Form 861, spreadsheet entitled Sales_Ult_Cust2022, DTE Electric excerpt. \$304,000,000 in additional funds divided by 40,897,642 DTE Electricity sales to ultimate customers in 2022 equals \$7.43 per MWh, or 0.743 cents per kWh.

⁴⁷ The \$7.43 per MWh times 15,844,478 in residential sales in MWh divided by 2,047,944 residential customers equals \$57.48 per year, or \$4.79 per month, rounded to \$4.80.

⁴⁸ See Koeppel Direct Testimony.

be far larger. Besides, demand response provides households with a tool to control their energy bills without making significant investments other than those initially needed to enable participation. Among other things, low-income households would have a tool to ramp up demand response and reduce energy bills, for instance, when unanticipated financial stresses and expenses occur.

II. Resilience and Microgrids

Q: Please describe the aspect of resilience you are addressing in your testimony.

A: I will focus on issues related to limiting harms from long-duration outages by creating facilities that will ensure that communities' critical needs are met by the provision of uninterrupted power supply for the corresponding loads.

Q: What are the costs of power outages to customers?

A: People and communities experience a variety of harms during power outages. The 2020 North Carolina resilience plan has described many of them:

Loss of power can create very cold indoor conditions for residents. Residents may try to heat their homes using alternative means, which runs the risk of carbon monoxide poisoning caused by improperly ventilated heating sources. In addition, dangerously cold temperatures increase the risk of wind chill, frostbite, and hypothermia. Another indirect impact is on public and private schools due to closings and delays due to the lack of power and heat. During times of extreme heat, air conditioning units work harder and require more electricity, making brownouts and blackouts possible if electricity demands exceed generation. Power outages occurring in the summer result in similar financial and societal impacts to the public and businesses.”⁴⁹

⁴⁹ Ex. DAO-271. NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, NORTH CAROLINA CLIMATE RISK ASSESSMENT AND RESILIENCE PLAN, 15 (June 2020).

There are also a variety of other harms. For instance, refrigerated food may spoil. If gas stations lose power supply, people in the community would not be able to refuel their vehicles or may have to travel long distances and wait in long lines to do so, incurring costs in the process.

Q: Do costs vary according to the duration of outages?

A: Both outage duration and frequency affect costs. The Interruption Cost Estimate (ICE) Calculator model, designed by Lawrence Berkeley National Laboratory, enables the calculation of the costs for power outages for mixes of customers and various durations of outages.⁵⁰ Input information required includes data on two of three reliability indexes: the System Average Interruption Duration Index (SAIDI), the Customer Average Interruption Duration Index (CAIDI), and the System Average Interruption Frequency Index (SAIFI), since the third can be calculated once any two are specified.⁵¹ The ICE model, which includes both outage duration and frequency information, is an important tool for estimating losses, such as loss of sales or loss of income, and is widely used.

However, the ICE Calculator model has some important limitations, including a major one relating to long-duration outages. To demonstrate those limitations for the resilience issues, I tested the model by comparing the cumulative losses it estimated for 12 one-hour outages for 2,000 residential sector customers in Michigan with a single 12-hour outage (SAIDI = 720 minutes in both cases; SAIFI = 12 in the first case and 1 in the second case). In other words, the overall outage time in the year was the same, but in the former

⁵⁰ Lawrence Berkeley National Laboratory, Interruption Cost Estimate Calculator, available at <https://icecalculator.com/home>.

⁵¹ SAIFI = SAIDI / CAIDI.

scenario, I broke it into 12 equal amounts, whereas in the latter, I attributed all of the time to a single outage.⁵²

Although the overall amount of time without power was the same in both scenarios that I tested, the damage results, shown in Table 3, were dramatically different. The loss per customer was 11.5 times larger when the outage duration was spread over 12 one-hour outages.

**Table 3: Losses for cumulative outages of 12 hours (720 minutes)
for Michigan residential customers
as estimated by the Interruption Cost Estimate Calculator,
adjusted for 2021 dollars⁵³**

	2,000 residential and 0 non-residential customers			
	SAIFI	SAIDI	Total loss	Loss per customer per year
Twelve one-hour outages	12	720	\$139,713	\$69.86
One twelve-hour outage	1	720	\$49,445	\$24.72

This is the inverse of what one would expect for critical residential sector harms. Generally speaking, one-hour outages spread over different days should be more tolerable for residential customers than a single twelve-hour outage. For instance, one-hour outages spread over different days over, say, three months of a very hot summer would not normally cause the loss of food and medicine. With suitable preparation, some light could be supplied safely with solar lamps or flashlights or both. The home temperature would rise to some extent, but in the vast majority of cases where air-conditioning was available, the temperature rise would likely not be to a level of serious discomfort or aggravation of an

⁵² In technical terms, in the first case I used SAIFI = 12 and SAIDI = 720 minutes; in the second case, I used SAIFI = 1 and SAIDI = 720 minutes.

⁵³ Ex. DAO-272, Lawrence Berkeley National Laboratory, Interruption Cost Estimate Calculator (for the inputs specified in the table). Adjustments from 2016 to 2021 dollars based on a factor of 1.13; see Ex. DAO-282. FEDERAL RESERVE BANK, ST. LOUIS ECONOMIC DATA, CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS.

1 illness. People would not have to seek shelter away from their homes to stay safe. The
 2 results show that while the model is sensitive to the number of outages per year, it is
 3 relatively insensitive to outage durations in the residential sector.

4 By contrast, a single long-duration outage, especially on a very hot or very cold
 5 day, could cause significant harm. A 12-hour outage may cause loss of meat stored in a
 6 refrigerator; spoilage may occur much sooner if it is opened frequently during an outage.
 7 A 24-hour outage may cause the contents of a half-full freezer to spoil; the same could
 8 occur in 48 hours in a full freezer.⁵⁴ Further, day-long or multi-day outages would cause
 9 many families to shelter away from homes without power to seek relief from extreme heat
 10 or cold and to meet other needs.

11
 12 **Q: Can you give quantitative examples of the cost of long-duration outages for low-**
 13 **income families?**

14 **A:** Yes. A typical well-stocked modern refrigerator would hold about \$250 worth of food in
 15 2017 food cost dollars,⁵⁵ which amounts to about \$325 when translated to food costs in
 16 April 2024 (\$280 in 2021 dollars), using the Federal Reserve Index for food costs in urban
 17 areas.⁵⁶ This estimate does not include food in the freezer associated with the refrigerator
 18 and does not include medicines stored in the refrigerator. The actual value of food in
 19 refrigerators would be expected to vary; normally, they would not be fully stocked. I will
 20 assume \$200 worth of food (2021 dollars) in a refrigerator and freezer at any given time,

⁵⁴ Ex. DAO-273. FOOD AND DRUG ADMINISTRATION, FOOD AND WATER SAFETY DURING OUTAGES AND FLOODS.

⁵⁵ Ex. DAO-274. Jodi Thornton-O'Connell, *How Much It Costs to Stock the Average Family Refrigerator*, GO BANKING RATES (2017).

⁵⁶ Ex. DAO-275. FEDERAL RESERVE BANK, ST. LOUIS ECONOMIC DATA, CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS: FOOD IN U.S. CITY AVERAGE.

1 with most of it in the refrigerator, as a reasonable value for purposes of an approximate
 2 calculation. I have not taken into account the value of medicines stored in refrigerators. A
 3 12-hour outage, especially if the refrigerator door must be opened to retrieve supplies,
 4 could result in the loss of much of the food in the refrigerator. A two-day or longer outage
 5 might result in a loss of all its contents.

6
 7 **Q: Could you explain the consequences of the loss of a few hundred dollars to a low-**
 8 **income family?**

9 **A:** The Federal Reserve does periodic studies of the economic well-being of households in the
 10 United States. It examines the ability of families to meet an unexpected \$400 expense as
 11 part of its review. The following represents some of its findings in that regard:

12 To understand more about covering household expenses, the survey asked about
 13 adults' ability to pay their monthly bills. As of October and November 2021, 24
 14 percent of adults indicated that they had, or were close to having, difficulty paying
 15 bills for that month: 14 percent of adults had one or more bills that they were unable
 16 to pay in full, and an additional 10 percent said they would have been unable to pay
 17 their bills if faced with a \$400 expense. The 24 percent having difficulty (or close
 18 to having difficulty) paying bills was down 3 percentage points from 2020 and
 19 down 4 percentage points from 2019. These declines are consistent with
 20 improvements seen in overall financial well-being.

21
 22 Lower-income adults were especially likely to face difficulty paying bills. Half of
 23 adults with a family income less than \$25,000 had one or more bills that they were
 24 unable to pay in full that month or were one \$400 financial setback away from being
 25 unable to pay them, compared with 5 percent for adults with a family income of
 26 \$100,000 or more.⁵⁷

27 While the above analysis, the most recent available, shows some improvement in
 28 2021 relative to prior years, conditions have since deteriorated. (The improvement in 2021

⁵⁷ Ex. DAO-276. BOARD OF GOVERNORS OF THE FEDERAL RESERVE, ECONOMIC WELL-BEING OF HOUSEHOLDS IN 2021, 36 (May 2022).

1 was in large measure due to the assistance provided to families during the COVID-19
2 epidemic by the Federal Government, which has since ended.) Food and many other costs
3 have greatly increased due to inflation. Even in 2021, an unexpected \$400 expense would
4 cause half of families with incomes below \$25,000 to be unable to pay some of their bills.
5 Thus, for low-income households, the loss of a few hundred dollars of food or the inability
6 to get to work during a multiday outage due to child-care needs with schools closed would
7 likely be very difficult and could send some of them into a crisis.

8 As another example of the differential impact on low-income families, wealthier
9 households can go to a hotel in an area with power for a couple of days to shelter from the
10 heat or cold; if working remotely, they could work from there. Low-income families
11 generally do not have such options.

12 In sum, long-duration outages can have serious financial and health impacts on low-
13 income families that need to be considered in utility planning and also in compensation for
14 outages. It is also critical to take measures to avoid those losses to the extent possible. I
15 therefore turn to my next topic—microgrids to increase community resilience during long
16 outages.

17
18 **Q: How is resilience connected to reducing the harms from long-duration outages?**

19 **A:** Resilience has many aspects, including making the grid more robust—fewer outages,
20 shorter outages, and quicker recovery from the effects of outages—and, recognizing that
21 outages will occur, ensuring that essential services for residents and for the community
22 have uninterrupted power supply even during long outages. For instance, community
23 shelters would be among the loads that would have uninterrupted power. Providing

electricity to the shelter would ensure that there would be heating and cooling at the facility and that there is power for charging phones, operating medical devices, and running refrigerators and freezers where people could store valuable perishables during outages. In that way, a small but non-negligible fraction of the normal power supply could reduce meaningfully the health and financial damage from long-duration outages. This aspect of resilience is growing in importance because the frequency of high-damage climate-related events has been increasing with climate change, including those related to severe storms and cyclones.

Figure 1 shows the total annual damage from billion-dollar-plus disasters; it has grown significantly in the last two decades relative to previous ones.⁵⁸

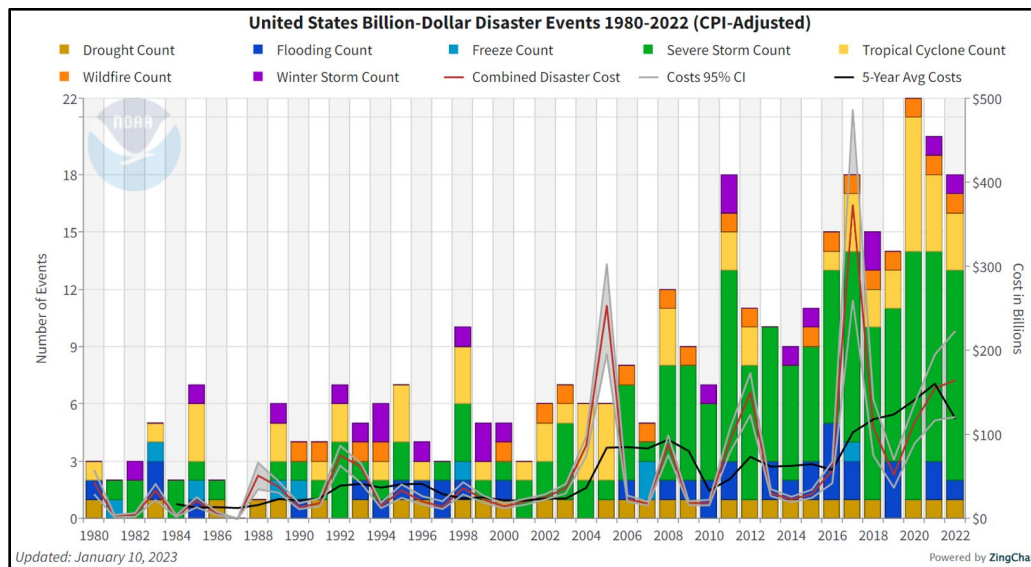


Figure 1: Disasters in the United States, counting only those that cost more than \$1 billion each. Note the growing prominence of severe storms and cyclones in the total damage amounts since about 2008.⁵⁹

⁵⁸ Ex. DAO-277. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, UNITED STATES BILLION-DOLLAR DISASTER EVENTS 1980-2022 (CPI-ADJUSTED) (Jan. 10, 2023).

⁵⁹ *Id.*

1 **Q: How can this aspect of resilience be operationalized?**

2 **A:** Critical functions within a community that need uninterrupted power supply must be
3 identified and investments must be made to ensure that power to them is uninterrupted.
4 From an electricity system point of view, these functions come to represent “critical loads”;
5 uninterrupted power supply to them will operationalize the concept so far as the electricity
6 system is concerned. Basically critical loads are those that would enable communities to
7 avoid severe disruption, maintain essential functions, and avoid ill-health during prolonged
8 outages. They include power supply for emergency shelters, food and fuel suppliers,
9 emergency response facilities, hospitals, and communications and medical devices.

10

11 **Q: Who determines critical loads?**

12 **A:** The community must be an essential part of decision-making to identify critical loads.
13 People in the community and community-based organizations are best positioned to know
14 the best grocery stores and gas stations to keep open using community resilience power
15 supply, what community facilities might best serve as shelters, what the food storage
16 requirements in shelters are likely to be, and how many people are likely to be served well
17 by specific existing facilities during long-duration outages. Utility participation is also
18 necessary to help determine feasibility and economics, including what the expected
19 duration of outages might be, given the steps to reduce such durations. Public Service
20 Commission oversight is necessary to ensure fairness and reasonable cost, especially since
21 the utility portion of the investments would be supported by all ratepayers.

22

1 **Q: How can continuous power supply to critical loads be achieved during prolonged**
2 **outages?**

3 **A:** At present, onsite emergency diesel generators power a few critical loads, such as those
4 necessary for allowing hospitals to operate during outages. These generators do not operate
5 when there is power supply from the grid, other than during periodic testing to ensure
6 availability in case of an outage. Individual homes and businesses also sometimes have
7 emergency generators, which typically run on fossil fuels.

8 Microgrids are also coming into increasing use. These are electricity supply
9 systems for individual buildings or campuses that have a single connection point to the
10 electricity distribution system. They interoperate with the grid during normal times,
11 importing or exporting electricity according to need and economics; they disconnect from
12 the grid automatically (called “islanding”) and continue to supply the pre-designated
13 critical loads that are wired for uninterrupted power. Normal operation with the grid is
14 resumed at the end of the outage. These are “behind-the-meter” microgrids, since the power
15 supply (and any associated storage) is on the customer’s side of the meter.

16
17 **Q: What is the electricity supply for the behind-the-meter resources?**

18 **A:** The energy supply is often fossil fuels; however, solar-plus-storage power supply have also
19 come into increasing use as costs have declined and because of the imperatives of
20 decarbonizing the electricity system. Further, using solar-plus-storage systems would
21 avoid the air pollution that would result from more pervasive fossil fuel generation, given
22 the resilience requirements for far more distributed generation.

1 **Q: Please describe how behind-the-meter microgrids assure the supply of electricity to**
2 **critical loads during outages.**

3 **A:** As noted, behind-the-meter microgrids operate behind building or campus meters where
4 critical loads are designated in advance; the loads on designated circuits draw power from
5 the campus generation resources, while other loads are disconnected during outages. The
6 length of time for which the system can supply these loads depends on a number of factors,
7 including the size and nature of the distributed resources, concurrent investments in
8 efficiency, the available fuel supply and the capacity to replenish fuel supply (such as diesel
9 storage tanks), and, in the case of solar-plus-storage, the size of the system and the state of
10 charge of the battery at the moment the outage occurs. Seasonal factors also affect solar-
11 plus-storage systems and are factored into their design. Normally, the design specifies the
12 maximum length of outage and the critical loads to be served.

13
14 **Q: What are the benefits of maintaining a continuous power supply to critical loads**
15 **during prolonged outages?**

16 **A:** Losses of the type discussed above can be greatly mitigated. Lower losses of food,
17 continuous operation of medical devices, the ability to work remotely and to communicate
18 by being able to charge cell phones would be substantial benefits that can be achieved with
19 a behind-the-meter microgrid for a single apartment building. Emergency shelters can
20 provide heated or air-conditioned spaces during periods of cold or hot weather, preventing
21 illness and providing safer emergency shelter. If there are gas stations that have power
22 supply, people can fuel their cars and get to work and school.

1 **Q: Have microgrid studies been performed for the Highland Park area?**

2 **A:** Yes.

3

4 **Q: Please describe how microgrids would improve resilience in Highland Park.**

5 **A:** The National Renewable Energy Laboratory (NREL) published a study in March 2024⁶⁰
6 describing the technical features and costs of three types of behind-the-meter microgrids
7 in the Highland Park area using its own REopt (Renewable Energy Optimization) model.
8 The first type examined typical residential and commercial buildings. The second analyzed
9 the Ernest T. Ford Recreation Center as a resilience hub. And the third was for a larger-
10 scale microgrid in Parker Village, a community in Highland Park that is being built.

11 NREL also published two other companion studies in the same month. One was
12 focused on energy burdens;⁶¹ the other was focused on electrification of fossil fuel loads
13 (vehicles, heating), distributed solar, and the ability of the distribution grid to adapt to these
14 new conditions.⁶² These studies were also focused on Highland Park.

15

16 **Q: What were the goals of the NREL microgrid analysis?**

17 **A:** The REopt model uses investment costs, operating and maintenance costs, electricity rates,
18 the amount of behind-the-meter generation, and the size of the microgrid to calculate the
19 net present value of the installation. The model allows for the exploration of ways to

⁶⁰ Ex. DAO-278. Tucker Oddleifson et al., *Prefeasibility Analysis of Behind-the-Meter Distributed Energy Resources in Highland Park, MI: Highland Park Pathways to Power*, NAT. RENEW. ENERGY LAB. (Mar. 2024).

⁶¹ Ex. DAO-279. Patrick Gibbs, *Housing Characteristics and Energy Burden Analysis for Highland Park, Michigan*, NAT. RENEW. ENERGY LAB. (Mar. 2024).

⁶² Ex. DAO-280. Erik Pohl et al., *Distribution Grid Impact Study in Highland Park, Michigan: Understanding Rooftop Solar, Behind-the-Meter Energy Storage, Electric Vehicle Charging, and Building Electrification*, NAT. RENEW. ENERGY LAB. (Mar. 2024).

1 optimize costs, clean energy generation, and resilience.⁶³ A positive net present value over
 2 the calculation period means that the installation will be profitable; this means that an
 3 increase in resilience has been achieved and, simultaneously, the cost of electricity has
 4 declined. A negative net present value means its costs will be greater than the output value,
 5 which, in effect, means higher costs for electricity. This is not necessarily bad; it just means
 6 that the resilience required will result in a net cost.

7 NREL described the rationale for the Highland Park REopt study as follows:
 8 “Highland Park, Michigan, community members face *frequent, long-duration power*
 9 *interruptions* due largely to the aging distribution system serving the area and the legacy
 10 design standards used in its construction.”⁶⁴ The analysis was sought by the Highland Park
 11 community and was done “with key insight from the community stakeholders”⁶⁵ as a
 12 component of Highland Park’s participation in the Department of Energy’s Community
 13 Local Energy Action Planning (LEAP) program.⁶⁶ I understand that the Commission
 14 provided a letter of support for the NREL work.

15
 16 **Q: Describe the principal features of the resilience aspects of NREL’s Highland Park**
 17 **modeling.**

18 **A:** Besides computing the net present value of financial benefits and costs, NREL’s modeling
 19 also estimated the fraction of the year for which critical loads could be met during four-
 20 hour outages and “how many hours the energy system can meet the critical load for all
 21 hours of the year.” The Highland Park community defined the critical loads. The residential

⁶³ Ex. DAO-278, slide 13.

⁶⁴ *Id.* slide 8 (emphasis added).

⁶⁵ *Id.*

⁶⁶ *Id.* slide 2.

1 building modeled was a 2,200 square-foot home; critical loads included one-fourth of space
 2 heating and air-conditioning, a refrigerator, a freezer, and 400 watts of plug loads for loads
 3 such as portable electronics, lighting, and wifi. The critical load was assumed to be 25%
 4 of the normal load for both the “typical” residential and commercial buildings analyzed.
 5 The resilience modeling aimed to meet the critical load during a 24-hour outage.⁶⁷

6 The modeling did not include the “value of lost loads;” for instance, it did not
 7 include the value of food that would be prevented from spoiling because power was
 8 maintained to refrigerators and freezers. NREL recommended evaluating these benefits of
 9 resilience in the future.⁶⁸ NREL’s analysis also did not include the climate value of carbon-
 10 free solar generation. I will attempt to estimate some of these benefits approximately.

11
 12 **Q: What were the main findings of the NREL microgrid analysis?**

13 **A:** While NREL modeled both resilience and non-resilience cases,⁶⁹ I discuss only the
 14 resilience cases in my testimony. NREL included both batteries and standby diesel
 15 generators in its resilience analysis. For typical residential and commercial buildings, the
 16 longest outage considered was 24 hours. For the Ernest T. Ford Recreation Center, it was
 17 72 hours (three days). For Parker Village, it was 120 hours (five days).

18 Table 4 shows some of the principal results of the NREL modeling and additional
 19 calculations I have performed. NREL’s study period was 25 years, a typical timeframe for
 20 solar generation studies, and I have translated NREL’s 25-year net present values into

⁶⁷ *Id.* slide 29.

⁶⁸ *Id.* slide 19.

⁶⁹ For instance, NREL modeled the economics of solar without storage and solar with cost-optimal storage, in addition to the resilience cases, in which the aim would be to ensure power supply to critical loads during long-duration outages.

1 monthly values. Table 4 shows the monthly net present values, as well as the net present
2 monthly value per home served. Ernest T. Ford Recreation Center would serve as a
3 resilience hub, and I have assumed it would shelter 90 households, based on the NREL
4 REopt study estimate that it could shelter 200 people.⁷⁰ I base my analysis on the case in
5 which there is no limit on the solar system capacity for the Center. For the Parker Village
6 calculations, I attributed only half the cost of the Parker Village microgrid to the per-home
7 monthly cost, since the residential load is only about 40% of the total.

⁷⁰ *Id.* slide 47.

1 **Table 4: Simplified summary of resilience cases analyzed by NREL⁷¹**

	Solar/battery/diesel size, kW/kWh/kW	Monthly net benefit (cost), \$/month (Note 1)	Benefit/(cost) per home, \$/month (Note 2)	% of year protection, long outages	Comment
Typical residential building 2,200 sq. ft.), Slide 31	4.62/27.7/0	(\$28.65)	(\$28.65)	97% (24 hr.)	
Typical commercial Building (33,000 sq. ft.), Slide 32	60.25/44.9/0	\$55.67	N/A	96% (24-hr.)	
Ernest T. Ford Recreation Center, solar + battery, Slide 48	100/1,110.5/0	(\$1,383.34)	(\$15.37)	96% (72-hr)	hub for 90 homes
Ernest T. Ford Recreation Center, solar +diesel	100/0/69	(\$151.87)	(\$1.69)	100% (72-hr.)	hub for 90 homes
Parker Village, solar + battery	2,626.85/8,990.3/0	(\$13,528.23)	(\$193.26)	96% (72 hr.); 91% (120-hr.)	28 homes (assigned 40% of cost)
Parker Village, solar + diesel	202.89/0/684	(\$1,837.55)	(\$26.25)	100% (72-hr); 95% (120-hr.)	28 homes (assigned 40% of cost)

2 From this analysis, it is evident that in all cases except a typical commercial building,
3 increasing resilience incurs net costs when benefits such as food not lost, shelter provided,
4 and avoided CO₂ emissions are not included. The picture changes significantly when they
5 are.

6

⁷¹ *Id.* slides 31, 32, 47, 48, 60, and 67. *See also* Ex. DAO-281 Makhijani NREL-based calculations.

1 **Q: How do the net costs change if the analysis takes into account some of the benefits of**
 2 **resilience?**

3 **A:** The net costs change the picture fundamentally in most cases when the benefits of
 4 renewable energy-powered resilience, such as the value of avoided CO₂ emissions, the food
 5 saved, and shelter provided for a two-day outage, are considered. I calculated the
 6 approximate present values of these benefits at the same discount rate (5.64%) and used
 7 the same period, 25 years, used by NREL. Then I computed the net benefit or cost by
 8 adding the benefits to the net present values estimated by NREL to illustrate the impact of
 9 taking quantifiable benefits of resilience into account. NREL uses 2021 dollars for the cost
 10 of PV. I have done the same in my calculations using the Federal Reserve Consumer Price
 11 Index.⁷²

12 I assume that food saved will be \$100 per family served per year (2021 dollars).⁷³
 13 This is on the order of half the value of food that might be found in a typical partially full
 14 refrigerator-freezer (see above). I use middle values from EPA's most recent social cost of
 15 carbon calculation, which it estimates at \$190 per metric ton in 2020, rising by \$4 per year
 16 (in 2020 dollars);⁷⁴ I converted these to 2021 dollars.

17 I took an approximate account of the declining carbon intensity of the grid by
 18 assuming that the amount of CO₂ per unit of electricity generation would decline over time.
 19 This is a complex calculation, in large measure because of the uncertainty of the pace at

⁷² Ex. DAO-282. FEDERAL RESERVE BANK, ST. LOUIS ECONOMIC DATA, CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS.

⁷³ This is a rather modest value to use. Many homeowner insurance policies provide up to \$500 as compensation for lost food during power outages. Ex. DAO-283 Rachel Brennan, *Does Home Insurance Cover Spoiled Food from a Power Outage?*, Policygenius, May 30, 2024.

⁷⁴ Ex. DAO-284. EPA, REPORT ON THE SOCIAL COST OF GREENHOUSE GASES: ESTIMATES INCORPORATING RECENT SCIENTIFIC ADVANCES (Nov. 2023).

1 which Michigan's electricity sector CO₂ emissions will decline. The state's working group
 2 on the matter recommended a 76% reduction in electricity sector emissions by 2030
 3 relative to 2018.⁷⁵ Based on this, and assuming a linear decline, the 2022 rate of CO₂
 4 emissions should have been 0.395 metric tons per megawatt-hour of electricity generated;
 5 however, it was actually 0.497 mt/MWh.⁷⁶ Michigan's climate plan aims for net-zero
 6 greenhouse gas emissions by 2050.⁷⁷ Given that electricity sector emissions sector must
 7 decline more rapidly to enable the achievement of low emissions in other sectors, I assumed
 8 zero emissions in the electricity sector in 2040 and calculated the net present value of the
 9 avoided social cost of carbon from 2026 to 2040; there is no carbon benefit of the resilience
 10 solar installations after that since the entire grid is assumed to have zero emissions.

11 For the Ernest T. Ford Recreation Center, I assumed that once each year, during a
 12 long-duration outage, 90 families would save \$100 on food that otherwise would be lost
 13 and would be sheltered for two nights at \$100 per family per night. The NREL modeling
 14 includes two industrial-scale refrigerators to enable the preservation of food during
 15 outages.

16 NREL does not provide first-year solar output for the Ernest T. Ford Center or the
 17 Parker Village cases. I estimated those solar outputs as follows. The commercial building
 18 solar installation has a tilt of 25 degrees, and the Ford and Parker Village installations have

⁷⁵ Ex. DAO-285. MICHIGAN COUNCIL ON CLIMATE SOLUTIONS, ENERGY PRODUCTION, TRANSMISSION, DISTRIBUTION, AND STORAGE WORKGROUP RECOMMENDATIONS (Oct. 2021).

⁷⁶ Calculated from Ex. DAO-263. U.S. Energy Information Administration, State Electricity Profile for Michigan (last accessed July 12, 2024).

⁷⁷ Ex. DAO-286. MICHIGAN DEPARTMENT OF CLIMATE, GREAT LAKES, AND ENERGY, MI HEALTHY CLIMATE PLAN (April 2022).

a tilt of 23 degrees.⁷⁸ I used NREL's PVWatts solar estimator⁷⁹ to calculate the output of the 60.25 kW commercial building installation at 25 degrees and 23 degrees. The ratio of the NREL study to the PVWatts result was 1.014 when the PV tilt was 25 degrees. The ratio of the commercial building PVWatts result at 23 degrees to that at 25 degrees was 0.9944. This gives a net adjustment to the PVWatts result for first-year solar output of 1.008 (1.014 times 0.9944). These are very minor adjustments overall.

Table 5 shows the results of this partial accounting.

Table 5: Net benefits (costs), without and with some resilience benefits⁸⁰

	Annual solar generation MWh/y	Avoided social cost of carbon	Food saved benefit	Shelter value	25-year NPV benefit (cost) from NREL, no non-energy benefits	Net 25-year NPV benefit (cost) with benefits, rounded
Typical residential building (2,200 sq. ft.)	5.6	\$2,947	\$1,300	\$2,600	(\$8,596)	(\$1,700)
Typical commercial Building (33,000 sq. ft.)	75.3	\$39,720	N/A	N/A	\$16,700	\$56,400
Ernest T. Ford Recreation Center, solar+battery	124	\$65,193	\$117,000	\$238,200	(\$415,002)	\$5,400
Ernest T. Ford Recreation Center, solar +diesel	124	\$65,193	\$117,000	\$238,200	(\$45,561)	\$374,800
Parker Village, solar+battery	3,246	\$1,712,299	\$36,400	\$74,100	(\$4,058,469)	(\$2,235,700)
Parker Village, solar +diesel	267	\$140,713	\$36,400	\$74,100	(\$551,265)	(\$300,100)
* Benefits are defined as carbon benefit, food saved benefit, and shelter value						

⁷⁸ Ex. DAO-278, slides 32, 42, and 59.

⁷⁹ See Ex. DAO-291. NREL PVWatts Calculator for Detroit, Michigan. I used the tilts and other parameters (including losses) as specified in Ex. DAO-278 (14% losses and 180 degrees azimuth), and I compared tilts at 23 degrees and 25 degrees.

⁸⁰ See Ex. DAO-281. Makhijani NREL-based calculations.

1 Including these key benefits at even modest levels per household for a single two-
 2 day outage annually changes the net present value of resilience microgrids from negative
 3 to positive, or close to it, in most cases. The residential case has a slightly negative value
 4 of \$5.67 per month;⁸¹ however, this takes no account of the value of living at home during
 5 outages and the lower disruption of daily life, including, for instance, school work and
 6 remote professional work. The notable exceptions are the Parker Village microgrids.
 7 However, the above calculation of benefits does not include the significant economic value
 8 of resilience to the commercial sector envisaged for Parker Village.

9
 10 **Q. How would your analysis apply to the commercial sector?**

11 **A:** The commercial sector would also derive significant value by having critical loads served
 12 continuously. Since a substantial cost of the Parker Village microgrid is associated with
 13 the commercial sector, I used the Lawrence Berkeley Laboratory calculator to estimate the
 14 benefits of reducing outages from the five-year DTE average in the 2018-2022 period of
 15 1.37 outages per year, averaging 563 minutes per year to one outage of 30 minutes per
 16 year,⁸² since all families and businesses would stay in their homes and open their
 17 businesses given the robust resilience assumptions (coverage of critical loads outages as
 18 long as five days in almost all cases—Table 4 above) made by NREL for Parker Village in
 19 the scenario considered in my testimony. The results are shown in Table 6, again converted
 20 to 2021 dollars (the model gives outputs in 2015 dollars). To be consistent with the prior
 21 calculations, I used 2026 as the starting year for the analysis.

⁸¹ \$1,700 divided by 25 years divided by 12 months equals \$5.67.

⁸² Ex. DAO-287. DTE Electric Co., Reliability Performance and Power Quality Resolution Process: DTE Electric Report for 2022 (April 3, 2022).

Table 6: Parker Village microgrid costs without and with co-benefits (as calculated using NREL’s estimator for costs of interrupted loads) plus avoided carbon costs⁸³

	Carbon benefit	ICE calculated benefits (Note 1)	NREL NPV, no benefits, slide 67	Net NPV, avoided CO2 + outage cost
Parker Village, solar + battery	\$1,712,299	\$ 1,257,486	(\$4,058,469)	(\$1,088,684)
Parker Village, solar + diesel	\$140,713	\$ 1,257,486	(\$551,265)	\$846,934

In this calculation, Parker Village’s resilience microgrid with diesel and a modest amount of solar has a substantial positive net present value, but the solar + storage case remains in negative territory. However, it is important to note that almost all (99.3%) of the benefits estimated by the model are in the commercial sector.⁸⁴ The model estimates a very low benefit per residential customer of only \$319 over 25 years (2021 dollars), which is just \$1.06 per month.⁸⁵ This means that thousands of dollars of benefits in terms of shelter and food saved from spoilage per household are not included; there are 28 residences existing and planned in Parker Village. Roughly \$100,000 in benefits should be added, if the same rate as the residential sector benefits shown in Table 5 is included.⁸⁶ This would still leave the solar + storage with a negative NPV of about one million dollars over 25 years. Attributing 40% of this to the residential sector (its approximate share of

⁸³ See Ex. DAO-288. Parker Village ICE calculations.

⁸⁴ Six businesses of various sizes are envisaged for Parker Village—a small security office 9320 sq. ft.), a “community resource center” 4,521sq. ft.), the Lyn Townsend Center (20,000 sq. ft.) and a three story building (are on each floor 8,922 sq. ft.) with different businesses on each floor. There are thus six businesses (counting the shared workspace as one business), including the security office, which would presumably be even more important to keep open during long outages. However, the office itself is very small. Therefore, I used five businesses as input for the ICE benefit calculation. The ICE Calculator default is to convert this to four small and one merdium-to-large business—in the present case that would be the Lyn Townsend Center. Ex. DAO-278, slides 57 and 60.

⁸⁵ Ex. DAO-288. \$319 divided by 25 years divided by 12 months equals \$1.06 per month.

⁸⁶ \$36,400 in food saved benefits plus \$74,100 in shelter benefits equals \$110,500, or roughly \$100,000.

electricity consumption projected for Parker Village), the net present value would be in the red by about \$47 per household per month.⁸⁷

NREL modeled air-source heat pumps for providing heat in Parker Village, but geothermal heat pumps could be a better alternative. Electrification is a critical part of reducing greenhouse gas emissions; coupling electric space heating with renewable energy, such as solar, eliminates CO₂ emissions. Geothermal heat pumps are far more efficient than air-source heat pumps, though individual ones also cost more. Several states are examining geothermal networks to increase efficiency while electrifying heating, among other objectives.⁸⁸ This approach has the added value to the electricity system (and therefore to all ratepayers) of reducing peak loads relative to air-source heat pumps, a benefit that could be very great as heating is electrified and peak loads shift to the winter, including winter nights. It may also change the net-present value of the solar-plus-storage resilience microgrid in Parker Village, which in its present configuration requires a very large battery (nearly nine megawatt-hours). However, it is beyond the scope of my testimony to examine the economics of underground geothermal heating networks.

Q: What conclusions do you draw from this extended review of NREL's analysis and the additional benefits that you identify of resilience from microgrids in Highland Park?

A: It is essential to take into account the significant benefits of increasing that aspect of resilience that provides uninterrupted electricity to critical loads. When that is said and

⁸⁷ (\$1,088,684) NPV plus \$100,000 in benefits equals (\$988,684). (\$988,684) divided by 28 residences divided by 25 years divided by 12 months * 40% residential equals \$47.08, or approximately \$47 per household per month.

⁸⁸ Ex. DAO-289. Jeff St. John, *Massachusetts Kicks Off First Pilot to Shift Gas Utilities to Clean Heat*, CANARY MEDIA (June 4, 2024).

1 done, almost all of the resilience cases have positive net present values. Communities are
2 going to need uninterrupted power supply to critical loads even more as climate extremes
3 worsen. In other words, the value of resilience installations is likely to increase
4 significantly.

5
6 **Q: How should the non-energy benefits of serving critical loads be calculated when**
7 **assessing microgrids?**

8 **A:** This question is analogous to the one concerning the non-energy benefits of affordable
9 energy. As far as the benefit of avoided CO₂ emissions, these can be reflected directly in
10 electricity bills of solar-plus-storage systems that are designed for resilience, i.e. at least 24
11 hours for individual homes and commercial buildings and at least 72 hours for resilience
12 hubs and community resilience microgrids like the one studied for the Ernest T. Ford
13 Recreation Center. The amount credited can be adjusted over time to reflect DTE system
14 CO₂ emissions as they evolve and updated values of the social cost of carbon as calculated
15 by the EPA.

16
17 **Q: The above examples all deal with behind-the-meter distributed energy resources for**
18 **microgrids. Are there other approaches to resilience microgrids?**

19 **A:** Yes. Area-wide microgrids that have front-of-the-meter solar and storage that include
20 critical loads at different meters. The Redwood Coast Airport Renewable Energy
21 Microgrid in northwestern California is an example. The project is “the first multi-
22 customer, front-of-the-meter microgrid with generation owned by a local CCA (Redwood
23 Coast Energy Authority) and the microgrid circuit owned by an IOU [Investor-Owned

Utility] (Pacific Gas & Electric). It [provides] low carbon resiliency to a commercial airport and U.S. Coast Guard Air Station, which are among the most critical facilities in the host community.”⁸⁹ The front of the meter 2.2 MW solar and 2.2 MW-AC battery normally sells power into the California wholesale market; it supplies power to critical loads for extended periods during outages.⁹⁰ A much smaller complementary net-metered behind-the-meter solar (without storage), 320 kW-AC supplies low-cost electricity to the airport.⁹¹

Q: What are the advantages of an area-wide resilience microgrid?

A: An area-wide resilience microgrid can combine a variety of essential loads into one facility design that may be located in different places and at different meters. For instance, gas stations, grocery stores, and emergency response facilities can be included in a single area-wide microgrid. As a result, a single area-wide microgrid can handle a more comprehensive set of critical loads in a community than can an individual behind-the-meter microgrid.

Q: What are the ownership characteristics of the Redwood Coast Airport Microgrid?

A: The solar and storage installations are owned by the Redwood Coast Energy Authority (“Energy Authority”), which is comprised of tribal, city, and county governments in the region. The Energy Authority is a “Community Choice Aggregator;” it owns generation installations and purchases wholesale electricity to supply its customers. The wires it uses to do so, including when it supplies critical loads during outages, are owned by PG&E, an investor-owned utility. This particular arrangement is common in California and is enabled

⁸⁹ Ex. DAO-290. REDWOOD COAST RENEWABLE ENERGY AIRPORT MICROGRID, FACTSHEET (JAN. 2020).

⁹⁰ *Id.*

⁹¹ *Id.*

1 by a state law enabling community choice aggregation. As a result, state law sets the
2 parameters according to which community ownership of generation installations (including
3 storage) can use utility-owned transmission and distribution wires. While this legal
4 framework clarifies institutional relationships, it was still necessary to address the structure
5 of investments needed for the microgrid; the resolution was that PG&E owns the necessary
6 microgrid circuitry.

7
8 **Q: Could a similar front-of-the-meter microgrid to supply critical loads across many**
9 **meters and buildings be built in the DTE region?**

10 **A:** In principle, such a microgrid could be built in the DTE service area. Islanding critical
11 loads in such a situation requires significant investment, but it is not a bar to building such
12 a microgrid. However, Michigan does not have a law enabling community choice
13 aggregation. This makes a similar ownership arrangement much more complicated. The
14 terms of the use of DTE-owned wires would need to be worked out, should a community
15 such as Highland Park wish to own the generation.

16
17 **Q: Is there an alternative way of approaching a front-of-the-meter community resilience**
18 **microgrid in the DTE service area?**

19 **A:** Yes. The generation could be owned by DTE, which already owns the wires.

20
21 **Q: What are the issues with such an approach?**

22 **A:** DTE ownership would simplify institutional and financial issues, but it means that the
23 ownership and control of an installation vital to the community would be in the hands of a

1 regulated for-profit entity. Thus, DTE ownership would deprive the community of the
2 opportunity to own the solar and storage installations and potentially to get the electricity
3 and the resilience at lower cost and with greater control.

4
5 **III. Conclusions**

6 **Q: Please summarize your main findings regarding the non-energy benefits of affordable**
7 **energy.**

8 **A:** My main findings regarding the non-energy benefits are as follows:

- 9 • Unaffordable energy seriously harms families who experience it; it also creates large
10 costs for non-low-income ratepayers and taxpayers as well as social institutions.
- 11 • Many of the harms are difficult to quantify, but even a partial accounting indicates that
12 the non-energy costs to society, such as those arising from the need to shelter those
13 rendered homeless and to cover a variety of added medical costs, are very large and
14 may be of the same order of magnitude as the costs of bill assistance needed to make
15 bills universally affordable, or possibly even greater.
- 16 • Many costs are difficult or impossible to quantify at present. For instance, about three-
17 fourths of the families who become unhoused due to conflicts between paying rent,
18 paying utility bills, and buying food and medicines find shelter with friends and family.
19 The costs of adverse health impacts of not being able to fill prescriptions fully and
20 using gas stoves and ovens for heating are also impossible to quantify at present, as
21 there is lost income due to missed work from these impacts. The costs of such social,
22 health, and economic disruptions are difficult or impossible to estimate at present.

- While there are many causes of becoming unhoused, there is evidence that conflicts between rent or mortgage payments and utility bill payments play a major and direct role. As a result, affordable energy can help people pay rent and make mortgage payments, significantly benefiting taxpayers, ratepayers, landlords, lenders, hospitals, and health insurance companies.

Q: Please summarize your findings regarding increasing resilience in the sense of maintaining uninterrupted power supply to critical loads.

A: My main findings are as follows:

- Long-duration outages cause significant harm to families and communities. These harms are increasing as climate extremes worsen.
- Resilience microgrids designed to provide uninterrupted power to critical loads can greatly reduce those harms and prevent the worst ones.
- It is important for communities to define the loads that are critical as discussed above in my testimony above.
- The analysis done by the National Renewable Energy Laboratory indicates that renewable power (solar energy) to critical loads using behind-the-meter microgrids can be achieved at various scales ranging from individual residential and commercial buildings, to public service buildings, like the Ernest T. Ford Recreation Center, to an entire housing-commercial development, like Parker Village. Good design can enable the supply of power to all or almost all critical loads in community microgrids for up to three-to-five day outages.

- 1 • My analysis indicates that it is essential to account for non-energy benefits such as the
2 value of shelter and avoided food loss and, for renewable microgrids, the avoided social
3 cost of carbon. Without this more complete accounting, most resilience microgrids that
4 would enable sustainable communities as climate extremes worsen may be rejected or
5 may impose costs on communities even though much larger populations benefit.
- 6 • It is also possible to create front-of-the-meter resilience microgrids that can cover a
7 wider range of critical loads in a single facility. However, under the present regulatory
8 and legislative conditions in Michigan, creating such microgrids faces significant
9 obstacles unless they are owned by DTE. That limits the options of communities to
10 own and control an essential resource and avoid the costs associated with profits
11 associated with ownership by an investor-owned utility.

12 13 **IV. Recommendations**

14 **Q: What are your principal recommendations regarding incorporating non-energy**
15 **benefits of affordable energy into this rate case?**

16 **A:** I have six major recommendations in this regard:

- 17 1. It is essential to include the non-energy benefits of affordable energy into ratemaking.
18 The data may be scattered and incomplete, but everything indicates that non-energy
19 benefits are huge.
- 20 2. I strongly recommend that the Michigan Public Service Commission conduct or
21 commission a comprehensive study that would quantify non-energy benefits. The
22 results must include the costs of unaffordable energy as much as possible and estimate
23 the benefits of achieving universal affordability. The assessment should include all the

1 costs and harms that are discussed in the surveys of the National Energy Assistance
2 Directors Association cited in my testimony. That said, such a study should not delay
3 the implementation and universalization of affordable electricity, given the magnitude
4 of the non-energy costs of unaffordable energy.

5 3. Evidence indicates that the non-energy costs of unaffordable energy can be greatly
6 reduced if energy is made affordable. The Commission should devote resources to
7 quantifying and tracking non-energy benefits experienced by those whose energy has
8 become affordable, especially among those who now have very high energy burdens
9 (above 15%) and also those experienced by society in the form of reduced costs of
10 social and medical services. Ratepayers and taxpayers get real value for assistance
11 money; they deserve to know to the extent possible what the dollars-and-cents
12 component of that value is.

13 4. The affordability gap for electricity bills alone is about \$380 million.⁹² About \$304
14 million is needed to make electricity bills affordable (3% of income for households
15 with non-electric primary heating and 6% for households with electric primary
16 heating).⁹³ Given the magnitude of the benefits, I recommend that this gap be filled
17 with suitable revenue sources as soon as feasible. The specifics of the funding issue are
18 addressed in the testimony of Witness Koeppe.

19 5. I recommend that universal enrollment be made as simple as possible to reduce the
20 burdens on potential applicants, to provide easy access to assistance to all who need it,
21 and to deliver the benefits of universal energy affordability both to low-income
22 households and to society at large.

⁹² Kinkhabwala Direct Testimony at 6.

⁹³ *Id.* at 19.

1 6. It is essential to prioritize investments to reduce energy burdens systemically as
2 discussed in the analysis of Witness Kinkhabwala. This will allow the portion of the
3 rates devoted to universal affordability to be reduced over time; it would also reduce
4 the need for public assistance.

5
6 **Q: What are your principal recommendations for incorporating resilience microgrids in**
7 **this rate case, notably as regards low- and moderate-income communities, including**
8 **Highland Park.**

9 **A:** I have five recommendations in this regard:

10 1. Long-duration outages, especially day-long or multi-day outages, cause significant
11 harm. Utility compensation for outages should, in part, be geared to the duration of the
12 outages. It should include a standard compensation for loss of food, which should be
13 set by the Commission in consultation with the community. Where suitable, safe public
14 shelter is not available during day-long and multi-day outages, compensation should
15 include the costs of alternative shelter. This is a key reason also to ensure that suitable
16 and sufficient emergency shelter spaces are available for everyone, with high priority
17 in low-income communities, where residents do not have the financial option of using
18 hotels. The Commission should consider progressive bill crediting. It should
19 significantly expand bill credits for outages, especially when it concerns long-duration
20 outages, to reflect the value of food and shelter lost. My calculations in this regard are
21 illustrative of the losses, but do not account for all losses, such as loss of medicines or
22 loss of work. Bill credits that reflect these losses may be substantially greater than those

1 estimated in my testimony, especially in census tracts or zip codes with high
2 proportions of low- and moderate-income households.

3 2. Renewable resilience microgrids that provide uninterrupted electricity to community-
4 defined critical loads appear to be economical in almost all the Highland Park cases
5 studied by NREL when the non-energy benefits, such as avoided CO₂ emissions,
6 avoided food spoilage, provision of emergency shelter, and avoided loss of business
7 are taken into account, to the extent quantifiable. As a result, microgrids should be
8 widely implemented. Given that Highland Park has suffered long-duration outages,
9 which hit low-income communities especially hard, as I have discussed in this
10 testimony, the Commission should set the conditions to make building microgrids in
11 Highland Park and other similar areas as simple and as efficient as possible. For
12 instance, net metering and compensation for exported electricity should reflect the fact
13 that the entire region benefits when people are sheltered and that businesses can
14 maintain critical services like selling food and fuel. I recommend that all three
15 resilience microgrids considered by NREL with the resilience durations as discussed
16 above be built, should the Highland Park community so desire, and that the utility
17 facilities needed to make that possible be factored into the rate base.

18 Three other resilience microgrids have also been identified by the community—
19 City Hall, the fire station, and the Senior Building. These should also be built, given
20 that the Ernest R. Ford Community Center will not be able to accommodate most
21 families in Highland Park during long-duration outages. It would also be substantially
22 more efficient and beneficial to provide resilience for seniors in their places of

1 residence. The value of doing so should be taken into account, in consultation with the
2 community.

3 I want to be clear that my recommendation for ratepayer support applies only to
4 resilience microgrids that would provide uninterrupted power to critical loads during
5 multi-day outages. The NREL analysis indicates that normal residential and
6 commercial building behind-the-meter resilience facilities can stand on their own, the
7 former if carbon credits are included and the latter even without them.

8 3. The Commission should conduct or commission a study to quantify the benefits of
9 behind-the-meter community resilience microgrids, with special attention to the
10 disproportionate costs of long-duration, i.e., day-long or multi-day, outages on low-
11 and moderate-income households. This effort should also examine the economics of
12 such installations when efficiency investments are made to reduce the need for power,
13 especially to reduce the electricity needed to provide heating and cooling to shelters
14 during outages.

15 4. I recommend that an underground geothermal network be evaluated as a pilot project
16 for at least one resilience microgrid in Highland Park, with community participation as
17 to its location, possibly Parker Village.

18 5. Front-of-the-meter microgrids could serve a larger variety of critical loads, possibly at
19 a lower cost. The Commission should initiate an analysis of the ways that that might
20 be done in Michigan, including particularly ways that will allow for community
21 ownership of the distributed generation and storage resources and the terms under
22 which they would have access to DTE's distribution system. DTE ownership of such
23 microgrids should also be studied for comparison, including cost. The ways in which

1 the community could have control over such essential facilities that it does not own,
2 such as with special governing boards, should be examined for their feasibility and
3 practicality.

4

5 **Q: Does this conclude your written Direct Testimony?**

6 **A: Yes.**

1 MR. TEMPLETON: Your Honor could we go
2 off the record for just a second.

3 JUDGE WALLACE: Sure. Off the record.

4 (At 12:18 p.m., brief off-record discussion.)

5 JUDGE WALLACE: Back on the record,
6 please go ahead.

7 MR. TEMPLETON: Thank you. On behalf of
8 the Detroit Area Advocacy Organizations, I move for
9 the -- I move to bind in the Direct Written Testimony of
10 Elizabeth Jacob. Ms. Jacob's direct testimony consisted
11 of a cover page and 31 pages of questions and answers.
12 As part of her direct written testimony, Ms. Jacob
13 sponsored one exhibit, DAO-301, and I also move for the
14 admission of that exhibit.

15 JUDGE WALLACE: Is there any objection to
16 binding in the testimony of Ms. Jacob?

17 Hearing none, the testimony is bound in.

18 Is there any objection to the admission
19 of Exhibit DAO-301?

20 Hearing none, that exhibit is admitted.

21 (Testimony bound in.)

22 - - -
23
24
25

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of DTE	)	
ELECTRIC COMPANY for authority to	)	Case No. U-21534
increase its rates, amend its rate schedules	)	
and rules governing the distribution and	)	ALJ Sally L. Wallace
supply of electric energy, and for	)	
miscellaneous accounting authority.	)	

DIRECT TESTIMONY OF ELIZABETH JACOB

ON BEHALF OF

DETROIT AREA ADVOCACY ORGANIZATIONS

(SOULARDARITY AND WE WANT GREEN, TOO)

July 26, 2024

1 **I. INTRODUCTION**

2 **Q: Please state your name, business address, and occupation.**

3 **A:** My name is Elizabeth (Liz) Jacob (she/her/hers), and my business address is 4606 Cass
4 Avenue, Detroit, Michigan 48201. I am employed as a Skadden Fellow and Staff
5 Attorney at the Sugar Law Center for Economic and Social Justice.

6

7 **Q: On whose behalf are you testifying?**

8 **A:** I am testifying on behalf of Solidarity and We Want Green Too—collectively known as
9 the Detroit Area Advocacy Organizations (DAAO) in this proceeding.

10

11 **Q: Please describe your work experience and professional qualifications.**

12 **A:** I have a bachelor's degree in sustainability marketing and environmental science and
13 policy from the College of William and Mary in Williamsburg, VA, and a juris doctorate
14 from the Yale Law School in New Haven, CT. I am licensed to practice law in the state
15 of Michigan.

16

17 **Q: Please describe your current professional work and its relevance to this case.**

18 **A:** The Sugar Law Center for Economic and Social Justice is a non-profit law firm that
19 provides free legal services to support low-income workers, their families, and
20 communities as they stand up and stand together for a fuller realization of their economic
21 and social rights. At the Sugar Law Center, I provide environmental and energy justice
22 legal services to low-income clients in the metro Detroit area. In my practice, I provide
23 direct legal services to low-income families to address a range of issues with DTE

1 Energy. To date, I have served more than 100 clients, all of which are low-income
2 households and the vast majority of which are households of color. Most of the legal
3 services I provide enforce customers' rights with respect to DTE Energy affordability and
4 collection issues, billing issues, shut-offs, and outages. While the services I provide
5 depend on each client's specific needs and the facts of their individual case, I have helped
6 dozens of families enroll in state utility assistance programs, negotiate payment
7 agreements with DTE Energy, resolve billing issues, avoid or navigate a shut-off of gas
8 and electric service, and receive compensation from DTE Electric following an extended
9 power outage.

10
11 **Q: What is the purpose of your testimony?**

12 **A:** The purpose of my testimony is to provide my direct experience as a legal services
13 provider to ratepayers struggling with affordability and collections issues with DTE
14 Electric. I will also address specifically some of the claims of DTE Electric Witness
15 Hatsios regarding requested IT Capital investments.

16
17 **Q: Have you provided testimony in a Michigan Public Service Commission (MPSC or**
18 **Commission) case before?**

19 **A:** While I have represented clients in proceedings before the Commission as described
20 above, I have not provided testimony in a Commission case such as this.

1 **Q:** Are you sponsoring any exhibits?

2 **A:** Yes, one.

3 DAO-301. U-21534 DTE Electric’s Response to DAAO’s Third Discovery Request,
4 DAADODE-3.10a through 3.10d.

5
6 **II. Low-Income Issues**

7 **Q:** What is your overall perspective on the effectiveness of DTE Energy’s various
8 programs and systems for supporting energy-burdened customers?

9 **A:** While providing direct legal services to more than a hundred low-income clients, I have
10 been shocked and dismayed by how few DTE Energy programs and resources there are to
11 address adequately the needs of energy-burdened customers. When I conduct an intake
12 appointment with a new client, I am often floored to learn that they spend hundreds of
13 dollars on their monthly DTE Energy bills. So many low-income families are dismayed
14 to receive ever-increasing DTE Energy bills each month, even as they do everything they
15 can to limit their use of electricity and keep their homes at barely livable temperatures. In
16 fact, many of my clients are spending upwards of 40% of their household monthly
17 income on their combined DTE Electric and Gas bills.

18 Despite their best efforts to reduce energy consumption and stick to a monthly
19 budget, my clients—like so many low-income customers—are trapped in a cruel cycle of
20 unaffordable energy. Many low-income DTE Energy customers face greater energy
21 burdens since they reside in older, energy-inefficient homes and live in utility-redlined
22 neighborhoods as DTE Energy has not invested in grid and line updates equitably within
23 low-income communities and communities of color in metro Detroit. The energy burdens

1 of low-income customers are exacerbated by quickly rising DTE Electric and Gas rates
2 that make it impossible for them to catch up and keep up with their bills.

3 Most of my clients are within 150 to 200% of the Federal Poverty Limit, and so
4 they are not only struggling with their DTE Energy bills, but they are also juggling the
5 compounded and rising costs of food, water, transportation, housing, and other basic
6 necessities. I have heard from far too many clients that they are making impossible
7 choices each month to prioritize paying their DTE Energy bills instead of paying their
8 rent on time or buying food for their families. My clients, like thousands of other low-
9 income customers throughout DTE Electric's service territory, are facing a crisis of
10 energy affordability that is being compounded by other systemic social and economic
11 harms.

12 In the face of this crisis, DTE needs to treat energy-burdened customers with
13 dignity, respect, and empathy. DTE also needs to provide them with accessible support
14 that allows them to keep on critically needed gas and electric services. However, time and
15 time again, I have seen DTE Electric's programs and systems provide abysmal support
16 for energy-burdened customers. Below, I detail some specific examples that underscore
17 how ineffective, insufficient, and inadequate DTE Electric's programs and systems are to
18 support low-income customers.

19
20 **Q: Is DTE Energy capable of managing challenging customer issues?**

21 **A:** No. Dozens of the clients I serve have complex or unusual issues with DTE Energy.
22 For instance, I have helped numerous clients navigate investigations with DTE Electric
23 regarding a meter malfunction, meter destruction, or meter theft issue. These issues

1 typically require an extended conversation with DTE customer service representatives to
2 understand the issue, coordinate and send an in-person DTE service crew to investigate a
3 meter issue, and then take the appropriate follow-up steps to rectify the meter issue. At
4 present, long call wait times, lack of consistent processes for customer representatives to
5 address complicated meter issues, and inconsistent follow-up with customers result in
6 DTE Energy not managing these challenging meter issues efficiently or effectively.
7 Moreover, despite DTE Electric's ongoing investments in digital self-service, many of
8 my clients have faced billing errors that create undue stress and anxiety for their
9 households to navigate. Issues like wrongful charges or other billing errors should be
10 straightforward to process, yet slow follow-up from customer service representatives and
11 a lack of clear resolution procedures can result in DTE Energy taking several weeks to
12 resolve these challenging customer issues. Still other clients have had issues with
13 DTE Electric-caused property damage, identity theft or fraud, or wrongly merged
14 residential and commercial DTE accounts. These types of issues can be complex and
15 require input from several different divisions within DTE Energy. DTE Energy often
16 struggles to effectively manage and coordinate across the Company to develop solutions
17 for these complex problems. As a result of DTE Electric's inefficient system of managing
18 complex or unique customer problems, these kinds of issues can take undue time, energy,
19 and effort on the part of the consumer to resolve.

20
21 **Q: Is it difficult to understand and navigate DTE Energy programs?**

22 **A:** Yes. Many of my clients have not completed high school and are not digitally or
23 technologically literate. Additionally, several of my clients have limited English

1 proficiency. I have seen firsthand how difficult it is for these clients to understand what
2 steps they should take when they fall behind on a bill or receive a notice for service
3 disconnection due to non-payment. When talking to DTE customer service
4 representatives on the phone, they may get helpful information, but more likely than not,
5 they are just met with cold indifference from customer representatives who simply
6 demand that my clients pay their bills as soon as possible. For many low-income, energy-
7 burdened customers with simply no financial resources, paying their full bill may just not
8 be an option.

9 While there are limited DTE Energy programs and governmental resources to
10 support low-income customers with affordability challenges, these programs are difficult
11 to understand, hard to navigate, and harder still to successfully access. The inability to
12 access DTE Energy programs and utility assistance programs falls the hardest on
13 customers with lower levels of educational attainment, English proficiency, and digital
14 literacy. DTE customer service representatives and digital self-service tools should be
15 centered on providing accessible and understandable information to all customers.
16 However, as will be detailed below, the lack of transparency in DTE Energy processes
17 and the lack of clear and accessible information for DTE Energy programs to support
18 low-income customers make it even more difficult for these customers to navigate DTE
19 Energy systems and programs.

1 **Q: Does the cost of DTE Energy’s services and problems with its programs lead to**
2 **chronic affordability challenges and financial hardships for your clients?**

3 **A:** Yes. Dozens of my clients have high arrearages to DTE that have built up over months to
4 years of rising gas and electric costs. All my clients work diligently to pay off their bills
5 to the best of their abilities, even while they are struggling to make ends meet. For
6 customers with high arrearages, programs like DTE Energy’s Shut-Off Protection Plan or
7 Payment Agreements are simply inaccessible due to high, required down payments to
8 participate in such programs and unaffordable monthly program payments. Accessing
9 these programs requires a downpayment that is often between 10% and 50% of the
10 customer’s outstanding balance. For clients that have arrears upwards of \$1,000, paying a
11 downpayment of \$100 to \$500, on top of high monthly bills and other essential expenses,
12 is simply impossible.

13
14 **Q: Does DTE Energy impose unaccounted-for and seemingly unapproved costs on**
15 **financially struggling customers?**

16 **A:** Yes.

17 For many low-income families, consistently paying off each monthly DTE
18 Energy bill—which for many families can be several hundred dollars a month—is an
19 ongoing struggle. From losing a job to having a family emergency, unforeseen
20 circumstances will arise that cause households to miss a payment at times.

21 DTE Energy recently started a new practice of requiring customers who miss as
22 few as one payment or have a credit card or check payment returned for insufficient
23 funds to make their subsequent payments at a physical DTE kiosk or at one of DTE’s

1 authorized payment agents. Several of my clients were told by DTE customer service
2 representatives that since they had missed just one payment, they would be forced to
3 make their payments in cash at a DTE kiosk for the next 12 months.

4 While there are DTE kiosks located throughout metro Detroit, I have heard from
5 several clients that they do not have any DTE kiosks that are accessible to them via
6 walking or public transportation. Many of my clients do not own a car and lack consistent
7 and affordable access to public transportation. As a result, many of my clients have to
8 spend extra resources—resources that could have gone towards paying their outstanding
9 DTE Energy bill—to find and pay for transportation to a DTE kiosk. When they are
10 finally able to make it to a DTE kiosk, DTE then makes them pay an additional service
11 fee to use the DTE kiosk to make their cash payment! As a result, energy-burdened
12 customers who are already struggling to make their monthly payments are charged an
13 additional service fee—which, to my knowledge, was not approved by MPSC—for a full
14 year. In effect, DTE Energy is inequitably charging a higher rate for energy service to
15 these low-income and energy-burdened customers vis-à-vis a consistent additional
16 monthly fee, as compared to all other DTE customers.

17
18 **Q: Is there insufficient communication and coordination between DTE Energy and**
19 **utility assistance programs providers?**

20 **A.** Yes, the communication between DTE Energy and utility assistance program providers is
21 insufficient. While supporting clients to navigate state utility assistance programs, the
22 State Emergency Relief Program, and the Michigan Energy Assistance Program, I have
23 witnessed numerous communication issues between DTE Energy and utility assistance

1 providers. While the Michigan Department of Health and Human Services (MDHHS) and
2 Community Action Agencies, respectively, manage these programs and not DTE Energy,
3 there are often significant communication gaps between DTE Energy and these partners
4 that result in additional stress, administrative burden, and confusion to low-income
5 customers.

6 As one example, I spent more than five months supporting a client to get a State
7 Emergency Relief utility assistance payment accepted and received between the MDHHS
8 and DTE Energy. In my experience, this process typically takes a few weeks for a
9 customer's utility assistance payment to be sent by MDHHS and received by DTE.
10 However, in this instance, a communication breakdown between MDHHS and DTE
11 Energy caused the payment process to drag out for months. While there were many
12 administrative hurdles on the part of MDHHS, DTE Energy communicated sporadically,
13 did not prioritize the issue, and did not offer clear timelines, processes, or assistance to
14 resolve the issue. As thousands of DTE Energy customers receive financial assistance
15 from the State Emergency Relief program each year, this process should be routine and
16 uncomplicated for DTE Energy to manage. However, poor communication and
17 coordination between DTE Energy and the MDHHS resulted in numerous complications
18 and undue stress for a low-income customer.

19 Moreover, I supported another client who received a Michigan Energy Assistance
20 Payment from the Salvation Army to pay off a large portion of their DTE Energy arrears.
21 However, the payment sent from the Salvation Army to DTE Energy on the client's
22 behalf was not processed correctly. Accordingly, the payment was not recorded on the
23 client's account, and the client's arrears remained unchanged. Despite DTE Energy

1 knowing that its system did not process the payment, DTE did not notify either my client
2 or the Salvation Army of the payment issue. Accordingly, the customer made a payment
3 to DTE Energy for their actual gas and electric usage the next month, thinking that they
4 no longer had additional arrearages on their DTE Energy account. Instead, since DTE
5 Energy did not process the Salvation Army's payment correctly, their arrearages
6 continued to add up. As they had a past-due balance with DTE, they were at a continued
7 risk of shut-off despite having correctly navigated utility assistance programs to pay off
8 their arrears. Even with my support, they had to navigate several additional weeks of
9 unneeded back and forth between DTE Energy and the Salvation Army, which caused
10 them significant unnecessary stress and hardship to navigate and resolve the issue.

11 These examples illustrate the stressful impacts of DTE Energy's inability to create
12 a system of streamlined and open communication with utility assistance programs that
13 prioritizes and efficiently resolves the needs of low-income customers.

14
15 **Q: Are there specific problems with DTE Energy's Shut-Off Protection Program that**
16 **you would like to highlight?**

17 **A:** Yes. As background, DTE Energy's Shut-Off Protection Program (SPP) is a payment
18 agreement option solely for verified low-income customers to enter into a standard
19 monthly payment plan for 12 months that includes both their average monthly usage and
20 their past due balance. DTE may charge customers a "recalculation fee" if their actual
21 usage within a three-month period exceeds their average usage as estimated in their

1 monthly SPP payment. To participate in the SPP, customers must both submit income
2 verification documentation online and pay a down payment to DTE Energy.

3 In my experience supporting clients, DTE has required a down payment that is
4 often between 10 and 30% of the customer's outstanding balance. For clients that have
5 arrears upwards of \$1,000, paying a down payment of \$100 to \$300, on top of high
6 monthly SPP payments, can make the program inaccessible. Additionally, income
7 verification documentation must be submitted online via DTE Energy's Customer
8 Document Submission Portal. This portal can be very confusing and difficult to navigate
9 for customers with limited digital literacy and access to technology. What's more, the
10 documents required by DTE for low-income verification—(1) identification for the
11 account holder; (2) legal documents to verify the household size; (3) documentation of
12 household income—often times create barriers and burdens for clients to present. I have
13 spent considerable time supporting clients to track down necessary documents like tax
14 returns, birth certificates and social security cards and helping them learn how to upload
15 the documents online. It is important to note that many of my clients do not have access
16 to these specific legal documents for all of their family members, so despite being
17 eligible for this program based on their household size and income, they are not able to
18 participate.

19 Then, once a low-income customer's documents are successfully uploaded to
20 DTE Energy's document submission portal, it can take several days for DTE Energy to
21 contact the customer and provide them with details to enroll in the SPP. Since many
22 customers attempt to enroll in SPP once they receive a shut-off notice, they are working
23 on a quick timeline of ten days or less to enroll in the SPP and make a minimum

1 appropriate payment DTE to avoid a service disconnection. The delayed follow-up from
2 DTE Energy to share program details and enrollment information can add even more
3 stress and burden to the already stressful experience of receiving a notice of utility shut-
4 off.

5 Moreover, I have witnessed numerous customer experiences that illustrate the
6 serious shortfalls of this program even after a customer has finally enrolled in the SPP
7 program. For instance, I have seen clients fall behind on a payment in the SPP by just a
8 few days—for instance, due to an unforeseen crisis such as losing a job or getting into a
9 vehicular accident—and then DTE Energy immediately and unceremoniously removes
10 them from the payment program. Moreover, DTE Energy does not make clear enough to
11 clients when they enroll in the SPP program that DTE may charge them the
12 “recalculation fee;” many customers then are shocked to receive additional charges every
13 three months in the shut-off protection program. These additional recalculation fees make
14 it impossible for residents to budget effectively and stay up to date on their SPP payments
15 and often cause my clients to fall out of the program. Once they fall out of the SPP, they
16 typically need to work with DTE Energy either to pay another downpayment to rejoin the
17 program or, if DTE no longer provides them with the SPP option, to try and negotiate a
18 payment agreement. This can create an additional burden on customers to continually
19 navigate, enroll, and re-enroll in the SPP. These issues highlight how one of DTE’s
20 primary company-managed low-income payment programs falls far short of meeting the
21 needs of low-income customers.

1 **Q: Does DTE Energy follow the law with regard to how it negotiates the terms of**
2 **customer payment agreements?**

3 **A:** Based on my experience, DTE customer representatives often do not follow the law with
4 respect to negotiating Payment Agreements with low-income customers.

5 Under Mich. Admin. R. 460.146(1), if a customer claims that they cannot pay a
6 bill in full, “[a] utility shall establish a policy to allow a residential or small
7 nonresidential customer the opportunity to enter into a minimum of 2 documented
8 payment plans for an amount owed to the utility that is not in dispute, if a customer
9 claims an inability to pay in full.” *See* Mich. Admin. R. 460.146(1). Under Mich. Admin.
10 R. 460.146(2), DTE Energy, as a regulated utility, “shall not require the residential or
11 small nonresidential customer to pay more than a reasonable amount of the outstanding
12 bill upon entering into the plan, and not more than reasonable installments until the
13 remaining balance is paid.” The regulation further outlines that the parties shall consider
14 *all* the following factors to determine an appropriate payment agreement: (a) the size of
15 the delinquent account, (b) the customer’s ability to pay, (c) the time that the debt has
16 been outstanding, (d) the reasons that the customer has not paid the bill, (e) the
17 customer’s payment history, [and] (f) any other relevant factors concerning the
18 circumstances of the customer. *See* Mich. Admin. R. 460.146(2)(a)-(f)).

19 However, in my experience supporting clients, DTE Energy rarely takes into real
20 consideration a customer’s needs or ability to pay when establishing a payment
21 agreement. At present, low-income customers cannot provide additional, relevant
22 information about their circumstances when trying to access a payment agreement on
23 DTE’s online webpage. So, calling DTE Energy’s customer service phone line is the only

1 way to even attempt to negotiate a payment agreement. When negotiating a payment
2 agreement over the phone, I see time and time again how DTE Energy customer
3 representatives simply give a customer a computer-generated payment agreement with a
4 set amount already established for both down payment and monthly payments. When
5 pressed to negotiate with a customer, DTE Energy customer service representatives will
6 often state that they cannot make any changes to the agreement generated by the system
7 and tell a customer to take or leave the Payment Agreement on the spot.

8 Instead of working with customers to develop plans that both allow the customer
9 to pay off their balance with dignity and allow DTE Energy to recover the full amount
10 owed, DTE Energy pushes unsustainable Payment Agreements onto customers that many
11 cannot sustain, and accordingly, end up defaulting on. Once they default on these
12 agreements, low-income customers then continue, once again, to accrue arrears that only
13 make it more difficult for them to ever be able to pay off what DTE demands from them.
14 What's more, a regulated utility is not required under law to allow a customer to enter
15 into more than two Payment Agreements if they have defaulted on a Payment Agreement
16 within the last 12 months. *See Mich. Admin. R. 460.146(3)*. So, since a customer's ability
17 to even be able to enter into a Payment Agreement is so limited, having a negotiated and
18 appropriate Payment Agreement that the customer can actually afford to stay in and keep
19 making payments is critical. Without even the limited benefit of a Payment Agreement,
20 customers are once again at immediate risk of service disconnection and the ongoing
21 problem of ever-growing arrears. This toxic cycle traps customers struggling with
22 affordability or collections issues.

1 **Q: Is it important for DTE Electric to offer phone service to customers undergoing**
2 **affordability or collections issues?**

3 **A:** Yes. Many of the clients I serve do not have consistent access to technology or the
4 internet. Furthermore, many of my clients do not have the digital literacy or skills to be
5 able to even navigate a webpage or use a chatbot. So, for these customers facing
6 affordability or collections issues, their only option is a phone call to DTE Electric.

7
8 **Q: But have you found DTE Energy's phone service for customers undergoing**
9 **affordability or collections issues to be adequate?**

10 **A:** No. I have not found DTE Energy's phone service for customers undergoing affordability
11 or collections issues to be adequate.

12 One problem with DTE Energy's phone service is that the length of wait times is
13 often excessive. In my experience supporting clients, I have found that DTE Energy's
14 call wait times can range from a few minutes to several hours. When I must wait several
15 hours with a client to get through to DTE Energy during a high-volume time, I see how
16 these lengthy wait times add additional stress to a client's already stressful affordability
17 or collection issue. Furthermore, many of my clients are working one or more jobs and
18 taking care of family members, all of which make it difficult for them to be able to stay
19 on the line during a long wait time. While DTE Energy does offer a feature where the
20 system will call back a customer when they are at the front of the phone queue, it can be
21 very difficult for working customers to be available for a callback that will only come
22 from 8 a.m. to 5 p.m. when DTE Energy's Residential Assistance phone line is in
23 operation. Regardless of whether one chooses to stay on the line or requests a callback,

1 DTE Energy does offer some estimates of the anticipated wait times for a phone call to be
2 received by their customer representatives; however, these estimates can vary greatly and
3 make it difficult to plan a work or personal schedule around.

4 These persistent struggles with getting on the phone with a DTE Energy customer
5 service representative result in many customers just giving up entirely on their call and
6 not working to resolve their issue. Insufficient staffing and investment in the customer
7 service phone line creates numerous challenges for customers, which especially burdens
8 low-income customers within limited time and capacity.

9 A further inadequacy of DTE Energy's phone service is how often customer
10 service representatives do not treat my clients and customers like them with respect or
11 dignity when they are attempting to navigate an affordability or collections issue. Clients
12 have told me that they have shared traumatic experiences and personal stories as to why
13 they need a payment deadline extension or a Payment Agreement with customer service
14 representatives, expecting to be heard and received with grace and understanding.
15 Instead, they have received cold and, at times, painful responses from DTE customer
16 service representatives. Clients have shared that DTE customer service representatives
17 have not listened to their experiences and provided them with only computer-generated
18 standard payment agreements or formulaic verbal responses that do not provide evidence
19 that a customer service representative heard and understood their needs.

20 Another problem is the lack of or inconsistency of information customers receive
21 from DTE customer service representatives. My clients have emphasized that DTE
22 customer service representatives have not directed them to the appropriate state utility
23 assistance programs (i.e., the State Emergency Relief Program or the Michigan Energy

1 Assistance Program) or DTE's Shut-Off Protection Program, even when they may be
2 eligible for such programs. Further, I have had numerous clients tell me that they will talk
3 to one DTE customer service representative and receive information, and then, the next
4 time they call DTE, there is no record of that conversation. Instead, they are instead told
5 entirely different information from a different customer service representative. This
6 creates confusion, mistrust, and apprehension in my clients and undermines their
7 reasonable expectations that DTE Energy will provide them with reliable information and
8 assistance.

9 In my experience, I have found that when I join a call with a client as their
10 authorized representative and attorney, there is a markedly different amount of respect
11 and consideration shown to the client's issue. For instance, when I call on behalf of a
12 client or join a client on the phone with DTE customer representatives, they are far more
13 likely to discuss and negotiate Payment Agreement options and highlight all the programs
14 that a customer is eligible for. All DTE customers are deserving of respect and should be
15 treated with dignity on a phone call, and it should not require the presence of an attorney
16 or authorized representative to yield such treatment.

17
18 **Q: Have you found DTE Electric's digital self-service tools for collections and**
19 **affordability issues to be responsive to the needs of your clients and customers like**
20 **them?**

21 **A:** No.

22 As mentioned above, many low-income customers, senior citizens, and people
23 with disabilities, among other energy-burdened customers, have limited digital and

1 technological literacy skills. Further, given this low level of technological and digital
2 literacy, even when my clients may have access to the internet, they are not able to open,
3 use, or navigate DTE Electric's self-service digital tools for collections and affordability
4 issues. In the absence of digital literacy education and skill-building, these customers
5 have immense difficulty even opening and navigating a website.

6 For the clients I serve who are digitally literate, many cannot afford computers or
7 even internet service at their homes. So, the only way that they can access DTE Electric's
8 digital self-service tools is by traveling to a public space with free internet access and free
9 computers to use, such as a library or community center. This puts an additional burden
10 on customers to find, travel, and potentially pay to be able to access the internet or a
11 computer, even as some may not have the skills and abilities to use those tools once they
12 are able to travel to them. As DTE Electric pushes more and more customers to digital
13 self-service solutions, I have had even more residents reach out to my office with
14 confusion about how to log into a DTE Electric customer account on their phone or
15 computer, to communicate with a chatbot, to find their bills online, or to make an online
16 payment.

17 As discussed above, customers who fall behind and miss even one payment to
18 DTE Electric are being asked to provide cash payments at DTE kiosks. Per Witness
19 Hatsios's testimony, DTE considers these physical DTE kiosks where low-income
20 customers are being forced to make cash payments to be a digital self-service tool.¹ For
21 those customers who have missed or defaulted on one payment, DTE has made it
22 impossible for them to access DTE's other digital self-service tools from their phone or

¹ Hatsios Direct Testimony at 38.

1 computer to make payments on these bills online. Instead, they are being forced to find,
2 travel, and pay an additional fee to utilize DTE’s other so-called “digital” self-service
3 tool: a physical kiosk that they must insert cash payments into. Witness Hatsios notes in
4 his testimony that upgrading “the Payment Kiosk to accept payments on customer
5 accounts that were disconnected for non-payment” is a “significant example” of the kinds
6 of collection enhancements DTE Electric hopes to make in the future.² This example
7 illustrates how low-income customers are *already* suffering from *more* collections and
8 affordability issues from DTE Electric’s existing investments in digital self-service tools.
9 This is illustrative of how DTE Electric’s investments in digital-self service tools are
10 quite literally making it more difficult and burdensome for low-income customers to be
11 able to make payments in a cost-effective and timely manner.

12 Furthermore, DTE Electric’s IT infrastructure is accessible to customers who are
13 not proficient English speakers or readers. As DTE Electric’s digital self-service tools are
14 available in only English,³ they can be very difficult for non-English speakers and readers
15 to use and access. I have heard from many non-English speaking clients that it can be
16 difficult— on top of the aforementioned difficulties of using technology—to navigate
17 DTE’s automated emails, text messages, or voice prompts.

18 Lastly, DTE’s automated emails, text messages, and voice prompts often have
19 outdated or inaccurate information. For instance, funding for the 2023-2024 State
20 Emergency Relief utility assistance program ran out of funding on June 15, 2024, and the
21 MDHHS provides no other funding for utility assistance. Yet, as recently as July 12,

² *Id.* at 57.

³ Ex. DAO-301. U-21534 DTE Electric’s Response to DAAO’s Third Discovery Request, DAADODE-3.10a.

1 2024, DTE still sent automated messages to newly verified low-income customers that
2 informed them to contact MDHHS for emergency financial assistance to pay their DTE
3 bills. The outdated and inaccurate information provided by DTE Electric’s digital self-
4 service tools only further burdens and confuses low-income customers.

5
6 **III. DTE’s Proposed Capital Investments**

7 **Q: What is DTE Electric’s request for IT Capital related to collections?**

8 **A:** I understand that DTE Electric is requesting recovery of \$10.7 million of IT Capital for
9 Collection digital self-service.⁴

10
11 **Q: What do you understand to be DTE Electric’s stated justification for IT Capital**
12 **related to collections?**

13 **A:** I understand from Witness Hatsios’s Direct Testimony that the “capital allocated to the
14 Collection digital self-service solutions is intended to enhance the Company’s existing
15 Collection digital solutions, and to expand the number of available digital solutions.”⁵
16 Witness Hatsios states that Collection Digital Improvements include “providing the
17 ability for customers to enroll in a payment arrangement on Web to pay their past due
18 amount over time”⁶

19

⁴ Hatsios Direct Testimony at 20-21.

⁵ *Id.* at 21.

⁶ *Id.* at 22.

1 **Q: What is your overall reaction to DTE’s proposal?**

2 **A:** While reviewing Witness Hatsios’s testimony, I was stunned at how DTE Electric’s
 3 proposed investments in digital self-service tools for collections were focused almost
 4 entirely on DTE Electric’s own costs and improving its financial metrics. DTE Electric is
 5 proposing to make the already stressful collections process more automated, more
 6 inequitable, no more accessible to non-English speakers, and less responsive to the needs
 7 of energy-burdened customers while increasing the amount of capital on which its
 8 shareholders may receive returns.⁷

9 Glaringly absent from Witness Hatsios’s testimony were meaningful actions to
 10 address the root causes of customer payment issues, which are the reason that such
 11 collection measures are needed in the first place. These IT Capital Investments do not
 12 provide additional resources or support to families who are struggling to afford their
 13 monthly DTE Energy bills or to address the enormous economic and social burdens on
 14 low-income families. Witness Hatsios himself notes that many of DTE Electric’s
 15 customers are facing significant affordability challenges, including high energy burdens,
 16 economic insecurity, and the ongoing impacts of the COVID-19 pandemic.⁸ Witness
 17 Hatsios correctly observes that relative to 2022, in 2023 there was a 15% reduction in

⁷ Witness Hatsios responded to DAAO discovery requests about what languages DTE Energy would add as part of the IT Capital Investments and what studies DTE had conducted about the languages used by its customers that “Digital Self-Service options are currently offered only in English.” Ex. DAO-301. U-21534 DTE Electric’s Response to DAAO’s Third Discovery Request, DAADODE-3.10a through 3.10d. Through these responses, DTE Energy admits it is not concerned with its non-English-reading customers’ ability to access these digital tools.

⁸ Hatsios Direct Testimony at 23.

1 available Energy Assistance funding and an increase in shutoff notices from 1.9 million
2 to 2.1 million.⁹

3 With even more households struggling to afford the rising costs of DTE Electric's
4 service, far more consideration should be given to whether the Energy Assistance
5 programs that DTE's digital self-service tools will be sharing information about have
6 adequate funding to serve eligible low-income customers. In 2024, the State Emergency
7 Relief (SER) program ran out of money on June 15, 2024, over three and a half months
8 earlier than the program's September 30 expiration date. Providers of the Michigan
9 Energy Assistance Program (MEAP)— which is supplemental state utility assistance
10 funding that can only be accessed with an approved SER award, unless the SER program
11 has expired, in which case customers can apply directly for MEAP funding, as happened
12 in June 2024—have stopped accepting new applications in the metro-Detroit region. With
13 state assistance programs out of funding for over a quarter of the year, there is limited use
14 for increased investments in digital self-service tools that share automated information
15 about assistance programs that low-income customers cannot even apply for or access.
16 The fact that Energy Assistance programs are running out of money as customer need is
17 skyrocketing further underscores how DTE's Electric's proposal to invest more in IT
18 Capital misses the mark of what low-income customers urgently need: more affordable
19 and less expensive electricity.

20 In my experience working with over a hundred low-income families to navigate
21 their issues with DTE Energy, I would argue that DTE Electric customers are facing
22 more than challenges—they are facing an energy affordability crisis that is threatening

⁹ *Id.*

1 the health and well-being of families. While Witness Hatsios claims that these digital
 2 self-service tools will include options for customers to enroll in payment plans or receive
 3 information about assistance programs, he makes no mention of how these programs will
 4 be improved, designed, or implemented to ensure they are meeting the needs of low-
 5 income and energy burdened customer populations.¹⁰ DTE's proposed IT investments do
 6 nothing fundamentally to make electric services more affordable, consistent, or reliable
 7 for my clients and customers like them.

8
 9 **Q: What is your response to Witness Hatsios' discussion of Collection call volumes and**
 10 **claim that savings for ratepayers as a whole will be achieved?**

11 **A:** Witness Hatsios makes sweeping, and likely incorrect, assertions about how the
 12 Company's past investments in IT have helped reduce collections call volumes while
 13 customers' needs for assistance have increased. Witness Hatsios notes that there were
 14 50,000 fewer collection calls in 2023 compared to 2022¹¹ and that "collection call
 15 volumes are not materially different than they were four or five years ago."¹² He notes
 16 further that in 2023 there was "an 11% increase in the number of active low-income
 17 customers versus 2022, a 28% increase in the number of low income customers who
 18 reached final arrears status, a 15% reduction in available Energy Assistance (EA)
 19 funding, and an increase in shutoff notices from 1.9 million to 2.1 million."¹³ Witness
 20 Hatsios concludes that "the Company maintains that the expected increase in Collection
 21 inquiry calls, was mitigated by a reduction in the number of calls from customers who

¹⁰ *Id.* at 21-22.

¹¹ *Id.* at 23.

¹² *Id.*

¹³ *Id.*

1 chose to use a digital solution to restore service, to enroll in a payment agreement, or to
2 check on the status of an account hold.”¹⁴ In effect, Witness Hatsios argues that, while
3 investments in digital self-service collection tools will incur costs, the investments will
4 ultimately save ratepayers money by reducing call volumes and the expenses the
5 Company incurs from calls.

6 However, from Witness Hatsios’s testimony, it is not at all clear why call volumes
7 have decreased while the number of low-income customers who have reached final
8 arrears status and the number of shut offs have both increased. While Witness Hatsios
9 argues that the fact that DTE Electric call volumes have not increased is due to
10 investments in digital self-service tools, there are many other plausible and reasonable
11 explanations for this phenomenon.

12 For instance, Witness Hatsios’ discussion ignores the fact that many customers
13 call DTE’s phone line and are dismayed and discouraged by the long wait times that
14 force them off the phone. If they then unsuccessfully try to use a digital tool to take
15 action for an issue that requires more individualized support from a customer service
16 representative, the customer may fall further behind on their bills or find themselves in
17 even more complicated issues because they were not able to resolve their issues quickly
18 and efficiently. As a result of not being able to have their needs met by DTE Energy
19 customer service representatives, customers may not be making as many calls as they
20 have in the past to resolve their issues and avoid shut off of their energy services.
21 Consequently, these customers may now be falling into avoidable and unnecessary
22 shutoffs because DTE Energy was not able and equipped to best meet their needs. In this

¹⁴ *Id.*

1 way, fewer calls could actually be *contributing* to the higher number of shutoffs as
2 customers were not able to get their issues resolved appropriately to avoid disconnection
3 of their services.

4 In addition, the Collection Digital Improvements do not adequately provide
5 customers with the ability to communicate with DTE the circumstances of their unique
6 situation and reach a payment agreement that they can afford. As previously discussed,
7 Mich. Admin. R. 460.146(2) outlines considerations that DTE must consider when
8 negotiating a payment agreement with a customer. Having better access to digital tools
9 does not solve the problem that DTE personnel need to assess each person's situation
10 individually to offer them a tailored suite of solutions. A fundamental issue with Witness
11 Hatsios's claim is that while digital self-service tools may provide additional options to
12 customers, they are not a sufficient replacement for phone service. The fact that there has
13 not been a marked reduction in call volumes over the last four years underscores that
14 even as digital systems are improved, there will continue to be customers who either need
15 or choose to resolve their issues via phone, whether because they have a complex
16 affordability problem that requires more personalized support or because they do not
17 have the digital literacy to use an online tool.

18 The fact remains that customers—including low-income customers—require both
19 call and digital services tools. However, DTE Electric must reorient these investments
20 away from maximizing corporate efficiency and returns to shareholders and instead
21 towards prioritizing consumer needs, access, and reliability.

1 **Q: In light of the issues faced by customers, what is your reaction to the fact that**
2 **increasing capital expenditures for digital self-service increases returns for DTE’s**
3 **shareholders?**

4 **A:** DTE Electric’s increasing investments in IT Capital increase returns to shareholders at
5 the expense of vulnerable ratepayers. By making these investments, DTE Energy is again
6 prioritizing profit-motivated investments over providing the level of customer service and
7 investments in affordable and reliable electricity service that my clients and customers
8 like them desperately need. In extolling the benefits of these IT Capital investments,
9 Witness Hatsios makes little to no mention of corresponding efforts to reduce energy
10 burdens, prevent or even minimize disconnection due to nonpayment, or improve
11 satisfaction and service for customers facing affordability and collections issues.

12
13 **IV. Recommendations**

14 **Q: In your experience, what improvements to DTE Electric’s digital or call service**
15 **tools are needed to serve ratepayers better?**

16 **A:** As highlighted above, DTE Electric’s call service and digital tools are rife with systemic
17 issues that must be addressed to better respond to the needs of low-income customers.
18 This Commission should engage low-income customers, organizations that serve them,
19 and other relevant community stakeholders to identify the improvements that would best
20 meet their needs based on their lived experiences.

1 Based on my experience, I recommend the following improvements to DTE
2 Electric's Call Service Tools:

- 3 • Hire more customer service staff to be able to reduce call wait times and
4 provide better service to customers;
- 5 • Train customer service staff on all DTE systems and programs to support low-
6 income customers;
- 7 • Train customer service staff on the requirements of Mich Admin. R. 460.146
8 so that staff can effectively and lawfully negotiate payment agreements with
9 low-income customers;
- 10 • Improve reporting requirements for calls so that all customer calls and the
11 content discussed are documented, tracked, and accessible during future calls;
12 and
- 13 • Outline clear guidelines and train customer service staff on how to treat all
14 customers—regardless of race, ethnicity, age, income, or any other identity—
15 with dignity and respect.

16 Based on my experience, I recommend the following improvements to DTE
17 Electric's Digital Self-Service Tools:

- 18 • Provide low-income DTE Electric customers with free internet services to be
19 able to access digital self-service tools;
- 20 • Translate digital self-service tools into the languages spoken by DTE
21 customers. Translation must meet the needs of non-English speaking
22 customers and should include meaningful considerations of different
23 languages and dialects spoken in communities in DTE Energy's service

territory, culturally appropriate language, and other cultural considerations in the translation of materials.

- Update digital self-service tools to be more accessible to people with limited digital literacy. One example could be updating digital self-service tools to include simpler, more streamlined, and easier to access information related to common customer issues like billing, affordability information, payment, and frequently asked questions to make these tools more accessible. Moreover, this digital content could be updated to feature more graphics, visual, and video explanations and less written text to make content more accessible and understandable to customers with literacy challenges. Further, closed captions on videos, alt-text for pictures and video content, and adding audio descriptions on web pages could make digital content more accessible. Moreover, assistive technology, such as screen magnifiers, the ability to have content read out loud, video resources, and voice commands, could also make these tools more accessible. Further, hosting in-person digital literacy trainings in communities across DTE Electric's service territory would provide opportunities to increase residents' digital literacy understanding and skills using specifically DTE Electric digital self-service tools. Offering digital literacy coaching and support via DTE Energy's phone service would also be a way to meet customers where their skill levels are at and provide individualized support. Additionally, a tracking system on a customer account where a customer could easily access all the calls, chat messages, emails, and mailed notices that DTE has sent them would allow customers to better

1 understand and track what information DTE is sending to them across
2 platforms and channels;

- 3 • End the practice of requiring customers who miss or default a payment to
4 make all payments at a DTE Kiosk for twelve months;
- 5 • Ensure that all DTE Electric digital self-service tools are accessible in the
6 languages and dialects spoken by DTE customers; and
- 7 • Ensure that DTE Electric digital self-service tools have to-date and accurate
8 information at all times.

9
10 **Q: Would these improvements address your fundamental concerns?**

11 **A:** While these recommended improvements would make a marked difference for
12 ratepayers, it is imperative to underscore that none of these improvements will address
13 the core issue: that DTE electric rates are unaffordable for their customers. DTE Electric
14 should certainly treat customers with respect and provide them with the information that
15 they need, and the convenience and efficiency of payment collection will undoubtedly
16 lead to cost savings and revenue benefits for DTE. However, these improvements do not
17 address ever-increasing DTE Energy rates, more unaffordable bills, and the other
18 systemic economic and social inequities faced by my clients and customers like them.
19 This Commission should direct DTE Electric to focus resources and energy on improving
20 the reliability of their services and reducing costs for ratepayers.

1 **Q: What recommendations do you have for the Commission regarding affordability**
2 **and IT Capital Projects serving energy-burdened customers?**

3 **A:** DTE Electric’s focus on automation and efficiency in collections is yet another example
4 that the company could not be further from understanding the needs of its most
5 vulnerable low-income and energy-burdened customers. DTE is forcing ratepayers to pay
6 for the company to deploy even more aggressive, automated, and inaccessible collection
7 practices against vulnerable customers. These increased investments in collections come
8 without similar investments from DTE Electric in affordability, reliability, consistency,
9 or customer service.

10 I am dismayed that DTE Electric is once again prioritizing using ratepayer funds
11 to exacerbate the already-dangerous crisis of collections related shut-off to increase
12 capital expenditures. Electricity must be seen by this Commission as a basic necessity to
13 live a healthy, safe, and fulfilling life. As such, this Commission must not allow DTE
14 Electric to continue to profit at the expense of low-income ratepayers. Allowing DTE
15 Electric to increase rates to cover costs like these yet again as inflation and rising
16 consumer goods costs continue to undermine the ability of low-income customers to pay
17 their bills is cruel and inhumane.

18 I implore the Commission to reject DTE Electric’s proposal to recover the \$10.7
19 million in costs associated with the Collections Digital Self-Service platform. The
20 Commission must also reject any other proposed IT investments from DTE Electric that
21 prioritize greater automation and efficiency at the expense of customer assistance,
22 affordability, and accessibility.

1 I urge the Commission to direct DTE Electric to focus investment and efforts on
2 programs and initiatives that meet and center the needs of low-income and energy-
3 burdened customers. These investments should include efforts to reduce energy burdens,
4 improve affordability, ameliorate dismal service issues, reduce high customer arrears, and
5 invest in the health and well-being of all customers.

6
7 **Q: Does this conclude your written Direct Testimony?**

8 **A:** Yes.

1 MR. TEMPLETON: Thank you, your Honor.

2 On behalf of the Detroit Area Advocacy Organizations, I
3 move to bind in the Direct Written Testimony of Toyia
4 Watts, that's T-o-y-i-a, last name Watts, W-a-t-t-s.
5 Ms. Watts' direct testimony consisted of a cover page and
6 32 pages of questions and answers. As part of her
7 written direct testimony, Ms. Watts sponsored Exhibits
8 DAO-311 through DAO-318, inclusive, and I also move for
9 the admission of those exhibits.

10 JUDGE WALLACE: Is there any objection to
11 binding in the testimony of Ms. Watts?

12 Hearing none, the testimony is bound in.

13 Is there any objection to the admission
14 of Exhibits DAO-311 through DAO-318? Is that correct,
15 318?

16 MR. TEMPLETON: Yes, your Honor.

17 JUDGE WALLACE: Hearing no objection,
18 those exhibits are admitted.

19 (Testimony bound in.)

20 - - -

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of DTE	)	
ELECTRIC COMPANY for authority to	)	Case No. U-21534
increase its rates, amend its rate schedules	)	
and rules governing the distribution and	)	ALJ Sally L. Wallace
supply of electric energy, and for	)	
miscellaneous accounting authority.	)	

DIRECT TESTIMONY OF TOYIA WATTS

ON BEHALF OF

SOULARDARITY AND WE WANT GREEN, TOO
(DETROIT AREA ADVOCACY ORGANIZATIONS)

July 26, 2024

1 **I. INTRODUCTION & SUMMARY**

2 **Q: Please state your name, occupation, and business address.**

3 **A:** My name is Toyia Watts. I am the President of the Charlevoix Village Association. My
4 address is 2475 Baldwin Street, Detroit, MI 48214.

6 **Q: Have you participated in any previous MPSC proceedings?**

7 **A:** Yes. I testified in the ongoing DTE Gas rate case (MPSC Case No. U-21291).

9 **Q: Please describe your education and professional background.**

10 **A:** I was born and raised in the City of Detroit. I graduated from Martin Luther King Jr. Senior
11 High School and attended Wayne County Community College. I have been doing
12 community work for over twenty-four years. In 2000, I started a community organization
13 on the East Side of Detroit that eventually became the Charlevoix Village Association
14 (CVA). I am currently the CVA president and am deeply involved in the organization.

16 **Q: Can you provide examples of the types of work the Charlevoix Village Association
17 does?**

18 **A:** I originally started getting people together in the East Side neighborhood to help us
19 understand gentrification and make sure that the neighborhood is changing in a way that
20 benefits us as residents. We do not want the neighborhood to change without true
21 community engagement and involvement in the process. Otherwise, changes are made to
22 appeal to newcomers and not to the people who are already there.

1 To make sure that our voices are heard, we attend meetings with the City of
2 Detroit's Planning Commission and City Council. We do a lot of outreach to elected
3 officials to make sure that they know that we are still here. We also look at things like the
4 water rate, the DTE electric and gas rates, and the alley lights to make sure that people
5 can keep their homes and stay in our community.

6
7 **Q: What is your relationship with We Want Green, Too (WWG2)?**

8 **A:** I am working to educate myself and the community on issues like energy efficiency and
9 home upgrades. These are also issues that are important to WWG2, so I have been working
10 with Gloria Lowe, the CEO and Founder of WWG2. For example, we have been attending
11 meetings where community members can voice their concerns about their electric service,
12 including complaints about the poles in the alley, the electric lines, and the transformers,
13 among other items.

14
15 **Q: Are you a DTE customer?**

16 **A:** Yes. I have been both a DTE Electric and DTE Gas customer since 2000. When my mother
17 passed in 2000, I changed the DTE account to my name, and now I am responsible for
18 paying the electric and gas combined bill every month. I have contacted DTE Electric on
19 various occasions regarding the electricity it provides.

20
21 **Q: Can you give a brief overview of your experience as a DTE Electric customer?**

22 **A:** My experience as a DTE Electric customer has been rocky at best. For example, while I
23 have participated in some of the Company's low-income assistance programs in the past,

I still struggle to pay my electric bills every month given that I am retired and live on a fixed income. I am also concerned about the Company's proposed 9.6% residential rate increase in this case¹ and how this increase will make an already unaffordable bill even more unaffordable. An increase of nearly 10% is simply too high. DTE Electric can do much better for the people in the community. The Company just received a \$368 million rate increase last year.² It does not make sense to raise rates again, so soon, and to this extent.

Q: How have you organized your testimony?

A: I have organized my testimony as follows:

Part II: Power Outages,

Part III: Financial Assistance,

Part IV: Shutoffs,

Part V: Time of Use Pricing, and

Part VI: Customer Service.

Q: Are you sponsoring any exhibits?

A: Yes, I am sponsoring the following exhibits.

DAO-311. Mike Wilkinson, *Michigan Near Tops in Nation for Outages. Utilities Want to Raise Rates.*, BRIDGE MICH. (May 28, 2024), <https://www.bridgemi.com/quality-life/michigan-near-tops-nation-outages-utilities-want-raise-rates>.

¹ DTE Electric Application, Attachment 4, at 3.

² *In re DTE Electric Co.*, MPSC Case No. U-21297, Order (Dec. 1, 2023).

1 DAO-312. Brian Allnutt, *Michigan Ranks #2 for Power Outages*, PLANET DETROIT (Jan.
2 19, 2024), [https://planetdetroit.org/2024/01/michigan-ranks-2-among-states-](https://planetdetroit.org/2024/01/michigan-ranks-2-among-states-for-power-outages/)
3 [for-power-outages/](https://planetdetroit.org/2024/01/michigan-ranks-2-among-states-for-power-outages/).

4 DAO-313. CITIZENS UTIL. BD., UTILITY PERFORMANCE REPORT: RANKING MICHIGAN
5 AMONG THE STATES (2023).

6 DAO-314. Christopher Flavelle, *A New, Deadly Risk for Cities in Summer: Power*
7 *Failures During Heat Waves*, N.Y. TIMES (July 2, 2021),
8 <https://www.nytimes.com/2021/05/03/climate/heat-climate-health-risks.html>.

9 DAO-315. Brian Allnutt, *The Battle Against Michigan Power Outages Yields Little*
10 *Accountability*, PLANET DETROIT (Mar. 1, 2024),
11 [https://planetdetroit.org/2024/](https://planetdetroit.org/2024/03/dte-power-outages)
12 [03/dte-power-outages](https://planetdetroit.org/2024/03/dte-power-outages).

13 DAO-316. Juan Pablo Cavallo & Joan Casey, *Weather-Related Power Outages Rising*,
14 CLIMATE CENT. (Apr. 23, 2024), [https://www.climatecentral.org/climate-](https://www.climatecentral.org/climate-matters/weather-related-power-outages-rising)
15 [matters/weather-related-power-outages-rising](https://www.climatecentral.org/climate-matters/weather-related-power-outages-rising).

16 DAO-317. Letter from DTE to Toyia Watts (April 22, 2024).

17 DAO-318. *Time of Day 3 p.m. - 7 p.m.*, DTE ENERGY (last accessed July 9, 2024),
18 [https://solutions.dteenergy.com/dte/en/Products/Time-of-Day-3-p-m---7-p-m-](https://solutions.dteenergy.com/dte/en/Products/Time-of-Day-3-p-m---7-p-m-/p/TOD-3-7)
19 [/p/TOD-3-7](https://solutions.dteenergy.com/dte/en/Products/Time-of-Day-3-p-m---7-p-m-/p/TOD-3-7).

1 **II. POWER OUTAGES**

2 **Q: How frequently have you experienced power outages?**

3 **A:** I have experienced power outages frequently in my area. I believe the outages were often
4 due to transformers and trees falling on power lines. For example, I remember a
5 significant outage in approximately 2021 when a tree fell, and we were out of power for
6 two whole days. I understand that outages are frequent for many of the Company's other
7 customers as well.³

8
9 **Q: How do power outages affect you?**

10 **A:** When a power outage occurs, it changes my whole day.

11 First, figuring out how to heat and cool my home is a significant challenge.
12 Unless you have a friend in a certain district that still has power—usually in a more well-
13 off district—there is nowhere to go really to get cooling and heating. In the summer, it
14 gets hot without any A/C, so I try to cool off on the porch when I can. Extreme heat,
15 especially for seniors, can be deadly.⁴ But you can only stay outside so long or so far into
16 the night. During winter outages, staying indoors without heating is tough given how
17 brutally cold Michigan winters can become. Last time, when a tree knocked out my

³ See generally Ex. DAO-311, Mike Wilkinson, *Michigan Near Tops in Nation for Outages. Utilities Want to Raise Rates.*, BRIDGE MICH. (May 28, 2024), <https://www.bridgemi.com/quality-life/michigan-near-tops-nation-outages-utilities-want-raise-rates>; Ex. DAO-312, Brian Allnutt, *Michigan Ranks #2 for Power Outages*, PLANET DETROIT (Jan. 19, 2024), <https://planetdetroit.org/2024/01/michigan-ranks-2-among-states-for-power-outages/>; Ex. DAO-313, CITIZENS UTIL. BD., UTILITY PERFORMANCE REPORT: RANKING MICHIGAN AMONG THE STATES (2023).

⁴ Ex. DAO-314, Christopher Flavelle, *A New, Deadly Risk for Cities in Summer: Power Failures During Heat Waves*, N.Y. TIMES (July 2, 2021), <https://www.nytimes.com/2021/05/03/climate/heat-climate-health-risks.html>, at 1 (“A widespread blackout during an intense heat wave may be the deadliest climate-related event we can imagine . . .”). According to one study, in an extreme heat wave without power, about 68% of Detroit residents (or 450,000 people) may be exposed to temperatures of 89.6°F or higher—the temperatures at which heat exhaustion and heat stroke may occur. *Id.* at 3.

1 power for two days in 2021, I had to stay at my sister's house because there was no other
2 way for me to stay warm. I had no choice but to leave my home if I wanted to be safe. If
3 a particularly bad storm were to shut off both my power and my sister's power, we would
4 have to somehow find someone else to stay with or pay to stay at a hotel that had power. I
5 will not stay home and risk problems with extreme cold or extreme heat.

6 Second, outages make it difficult to feed myself at all. During outages, I cannot
7 use my stove or fridge, and my groceries will often spoil. This can be costly and
8 challenging, especially for seniors like me and others on fixed incomes who cannot afford
9 to eat much out or to waste groceries.

10 Third, ensuring that my flashlights and electronics remain usable comes with
11 other troubles and costs. At night, I have to use flashlights or sometimes burn candles in
12 order to see anything and move around safely. It is easy for the batteries in flashlights and
13 other electronics to burn out, though, at some point. Because I cannot charge my phone in
14 the house, I also have to run the car to try to charge it. That wastes gasoline, though.

15 It is not just me; my friends and family have been seriously affected by the
16 outages too. A few months ago, I remember a particularly challenging power outage that
17 affected my nephew, who also lives in Detroit and is a DTE account holder. His family's
18 power went out for two days. Because they had a newborn baby then, they struggled to
19 keep the baby's formula cold without a functioning refrigerator. He ended up having to
20 find and use a cooler. Additionally, they had no way to heat the bottles later, either. The
21 outage was quite stressful for them. I know others in my community have also waited
22 very long to buy dry ice to keep their groceries refrigerated.
23

1 **Q: When a power outage happens, does DTE restore power quickly?**

2 **A:** No. In my experience, it typically takes DTE two days on average to resolve a power
3 outage. My neighbors and I have had to call DTE many times to get the power restored.
4 Similarly, during power outages, notifications and the frequency of updates from DTE on
5 when the power will be restored are inconsistent. There is a lot of uncertainty. DTE does
6 not communicate effectively. Even if DTE provides an estimate over the phone of when
7 power will be restored, we never truly know when the power will come back on, leaving
8 my neighbors and myself with no power and left in the dark—metaphorically and
9 literally—regarding when power will be restored.

10

11 **Q: Have you ever received an outage credit from DTE?**

12 **A:** I remember receiving an outage credit of \$25 during the two-day outage in 2021, but I do
13 not recall receiving any other outage credits. The credit of \$25 was hardly sufficient to
14 cover the expenses from the outage. What is \$25 given back on our bill when we had
15 been out of power for two days? The credit was not automatic either. I had to remind
16 DTE to add the credit after I did not see it on my bill. Prior to testifying in this case, I had
17 not been aware of any other ways to apply for or receive outage credits.

18

19 **Q: In your opinion, how can the Company better compensate customers for outages?**

20 **A:** Outage credits should be more frequent and in higher dollar amounts. The one-time \$25
21 credit I received during the two-day outage in 2021 was not enough to cover the
22 additional expenses incurred, such as spoiled food.

1 I understand that the Commission recently updated its outage credit rules in
2 MPSC Case No. U-20629, including making the credit automatic and increasing the
3 credit from \$25 per sustained outage to \$38 per outage (plus \$38 for each additional day
4 of lost power).⁵ While these new rules are a step in the right direction, the adjustments do
5 not go far enough. The current credits are too low and do not kick in soon enough.

6 First, outage credits should be high enough to reflect the costs and inconvenience
7 associated with extended power outages. The flat \$38 per outage is barely anything and
8 would not cover my expenses from a prolonged outage.

9 Second, under the revised MPSC rules outage credit rules, the automatic credits
10 only kick in after 48 hours under catastrophic conditions such as an extreme weather
11 event and 96 hours under normal conditions. As Roshan Krishnan of the Michigan
12 Environmental Justice Coalition puts it, “The duration limits are such that you have to be
13 an extreme outlier in order to receive the credits.”⁶ That means I would have to wait days
14 before I even see a cent. That is just not right. In fact, the current system is a bit
15 ridiculous—insulting even.

16 Instead of the current flat rate, I support mandating an hourly credit,⁷ which
17 would make the credit more proportionate to the scale of the outage and subsequent costs.
18 If the power is out, we should be getting compensated for every single hour. They want to

⁵ See generally *In re Serv. Quality & Reliability Standards*, MPSC Case No. U-20629, Order (Mar. 24, 2023); *In re Serv. Quality & Reliability Standards*, MPSC Case No. U-20629, Order (Sept. 28, 2023).

⁶ Ex. DAO–315, Brian Allnutt, *The Battle Against Michigan Power Outages Yields Little Accountability*, PLANET DETROIT (Mar. 1, 2024), <https://planetdetroit.org/2024/03/dte-power-outages/>, at 3.

⁷ See, e.g., Ex. DAO–315 at 3 (discussing hourly credit proposals of \$2 to \$5 per hour).

1 charge us for every hour we use, so why should the Company not pay us for every hour
2 we are without power? That seems fair to me.

3
4 **Q: Currently, DTE pays outage credits to customers out of its own shareholder profits.⁸**
5 **However, the Company has requested deferred recovery on credits “outside DTE**
6 **Electric’s control.”⁹ Do you have any concerns about this request?**

7 **A:** DTE should absolutely be footing the bill itself, not passing it back to ratepayers. We are
8 already paying enough for our utilities. It is the Company’s job to keep the lights on, and
9 it should be responsible for compensating us when it fails to do so. The Company’s
10 proposal is especially concerning because it is requesting recovery for outages caused by
11 weather-related events, including ice, lightning, wind, and “other weather.”¹⁰ Weather is
12 a large and growing cause of outages.¹¹ If the Commission were to approve these
13 changes, it does not seem far-fetched to think DTE will try to claim nearly all outages are
14 outside its “control”—ultimately saddling ratepayers with ever-increasing bills.

15
16 **Q: Have you ever considered getting a backup generator?**

17 **A:** Yes. I worry that, without a generator, I may not have the means to ensure my basic
18 electricity needs are met during an outage. But finding and funding a backup generator is
19 incredibly tough, especially on a limited budget. The upfront costs alone can be
20 overwhelming, not to mention the time needed to figure out which generator is reliable

⁸ Crozier Direct Testimony at 31.

⁹ *Id.* at 31–33.

¹⁰ *Id.* at 33.

¹¹ Ex. DAO–316, Juan Pablo Cavallo & Joan Casey, *Weather-Related Power Outages Rising*, CLIMATE CENT. (Apr. 23, 2024) at 1.

1 and affordable. I do not know much about generators, so I would not know how to pick
2 the right one even if I could afford it.

3 Moreover, the ongoing costs and physical effort required are beyond what many
4 of us can manage. First, it is expensive to maintain a generator and purchase gasoline
5 regularly. Maintenance and fuel expenses would add up quickly, making it even harder to
6 think about backup generators as a realistic option. Second, for me and other elderly
7 individuals living alone, starting a backup generator—especially the gas-powered ones I
8 have seen that are akin to pulling a lawnmower—is too physically demanding. Just
9 thinking about the logistics of handling a generator is daunting.

10
11 **Q: In your opinion, is there anything the Company should do to reduce the number of**
12 **outages in your area?**

13 **A:** Yes, DTE should update our power lines from overhead lines to underground lines to
14 reduce the number of outages. In my neighborhood, we have encountered ongoing
15 challenges with the overhead power lines. Recently, the Company has undertaken a
16 significant infrastructure upgrade in the area with a new substation and extensive tree
17 clearing along the main street, resulting in numerous visible electrical poles. This
18 “upgrade” is perplexing, however, because the neighborhoods just on the other side of
19 Kercheval Avenue seem to benefit from underground lines, which seem to result in more
20 reliable power for them. When our power goes out, it is frustrating to see their lights
21 always remain on. It feels as though they are the “haves,” and we are the “have-nots.”
22 There are big differences in the problems that plague our side versus theirs. Each side is
23 socioeconomically and racially different, and I am sure that plays a role. Overall, the

1 disparity in infrastructure raises questions about why some areas receive underground
2 service while ours does not, despite the same need for reliable service. We deserve
3 power, too; we all pay the same bill, so why are we not treated the same by DTE?

4 I have raised these concerns with local commissioners, who have mentioned
5 business density as a potential factor influencing infrastructure decisions. However,
6 recent developments in our area suggest growth that could support such upgrades. More
7 importantly, increased reliability and reduced maintenance justify the investment in
8 underground lines. There is no justifiable reason why only some of DTE's Detroit
9 neighborhoods receive underground lines while others, like mine, do not.

10 Similarly, if DTE is going to keep the lines above ground, the Company should be
11 more proactive in trimming the trees. Why do we wait until tragedy happens to cut down
12 the trees? Additionally, underground lines would prevent issues like squirrels damaging
13 overhead lines, which was a problem I personally experienced. This year, squirrels
14 damaged the power lines located directly outside my home, causing my lights to
15 constantly flicker on and off whenever the wind would blow. I had to call DTE to fix the
16 issue. When DTE came to fix my power issues, they ended up having to replace the old
17 lines.

18
19 **III. LACK OF ADEQUATE FINANCIAL ASSISTANCE**

20 **A. Affordability Generally**

21 **Q: What DTE low-income assistance program are you currently participating in, if any?**

22 **A:** I am not currently enrolled in any DTE low-income assistance program. I was previously
23 enrolled in the Low-Income Self Sufficiency Program (LSP), but I received a letter that I

1 “completed” from the program in April of this year.¹² The Company seems to think I can
2 handle a bigger bill, but I cannot. Additionally, I recently learned that, while I was an
3 LSP participant, I had also been receiving a Low-Income Assistance (LIA) credit of \$40
4 because DTE Electric automatically offers the LIA credit to LSP participants.¹³ I believe
5 I am no longer receiving the LIA credit now that I have graduated from LSP.
6

7 **Q: Do you recall receiving information in the mail regarding the Company’s assistance**
8 **programs?**

9 **A:** I cannot remember a recent time when I received a pamphlet or brochure from DTE
10 about its assistance programs—either through mail or email. Usually, I try to be proactive
11 about finding these programs in the first place—for example, I visit DTE’s website from
12 time to time to see if the Company is running any new programs—so I would have
13 remembered if DTE had sent me information about assistance programs. Even if DTE is
14 sending us brochures, it is not sending them to us nearly as frequently as it should be. It
15 would be easy for me to miss if DTE is sending the brochures only once a year or burying
16 them within a package of other materials—and I am sure other customers may have that
17 problem, too.
18

19 **Q: Do you find the Company’s assistance programs difficult to navigate?**

20 **A:** Yes, I find the Company’s assistance programs difficult to navigate.

¹² Ex. DAO–317. Letter from DTE to Toyia Watts (April 22, 2024).

¹³ Sparks Direct Testimony at 18 (“Customers who become enrolled in the LSP program are also enrolled to receive the LIA credit.”).

1 According to DTE, for its programs such as LSP, “A dedicated team of customer
2 advocates within the Company are ready to assist customers while enrolled.”¹⁴ I am
3 aware that DTE also claims to inform customers about energy assistance through various
4 strategies such as calls, automated letters, and email campaigns, as well as virtual
5 webinars and Customer Assistance Days.¹⁵

6 However, in my experience, DTE does a poor job of communicating with
7 customers directly about its various assistance programs. I am actively looking for
8 assistance programs and calling DTE, but DTE has yet to inform me about any programs
9 that are available and for which I might possibly be eligible. When I call DTE asking if
10 there are any programs besides LSP, the representatives usually just say only BudgetWise
11 is available and that I need to work with other organizations if I want to re-enroll in LSP.

12 Moreover, while services such as 211 United Way may get their information from
13 DTE,¹⁶ I have found that 211 is a more reliable source of information about my energy
14 bills than DTE. I am able to simply call 211 and see what programs are out there—
15 something that is not as easy when dealing directly with DTE. Honestly, if I had not been
16 proactive in finding out information regarding my bills, I do not think I would ever have
17 heard of any programs to help.

18
19 **Q: How does the insulation in your home affect the affordability of your bills?**

20 **A:** My house is not insulated well. My dad was lucky to be able to afford the house in the
21 1940s after World War II and bought it for \$8,000. However, because it was built a long

¹⁴ *Id.* at 8.

¹⁵ *Id.* at 7–8.

¹⁶ *See id.* at 7.

1 time ago, it has always been poorly insulated. Proper insulation is crucial—without it, the
2 air conditioning or heating must work harder, which drives up my bill. For instance,
3 before my windows were weatherized, if you put a lighter up to the window, you could
4 see the flame move from the cold air coming through. To keep my bills low and the
5 house warmer in winter, I used to cover the windows with plastic bags from the grocery
6 store. In 2014, I was able to work with the City of Detroit to install new windows, which
7 made a difference in the winter and helped lower my bills.

8 Earlier, in 2008, DTE also had a program to “weatherize” my walls by installing
9 better insulation, but I have noticed that the feather-like material the Company used for
10 insulation seems to not be performing as well anymore. It seems like it is not insulating
11 as effectively, so I have been contracting organizations to see if there are any programs
12 available to have the walls re-insulated with something better. Better insulation would
13 reduce my bills and improve my comfort at home.

14
15 **Q: Does the cost of your electricity affect how much you cool your home using A/C?**

16 **A:** Yes, I try to reduce my A/C usage to reduce my electric bills, but it is a challenge to keep
17 my home cool enough without running up the bill. I know the only real way to save on
18 energy costs is to avoid turning on the A/C at all, but I have to make sure my own home
19 is at least a bearable temperature. For me, I try to keep it on a lower setting with the fan
20 on low to manage the cost, while trying to be careful not to sacrifice my health. I have
21 asthma, so it is crucial for me to keep the air quality and temperature in check. If it gets
22 too hot, it is hard for me to breathe, so I need to ensure the A/C is running enough to keep
23 the air manageable. I worry about heat hazards and my health.

1
2 **Q: What are your overall recommendations regarding low-income assistance programs?**

3 **A:** At the end of the day, I just need an affordable monthly bill. It would be easier and
4 simpler if DTE had one unified program that helped me pay the portion of my bill that I
5 cannot afford—such as a Percentage of Income Payment Plan (PIPP). Ideally, the
6 Commission would require DTE to enroll me in these programs automatically and keep
7 me enrolled—at least without the significant hassle that I currently undergo. Currently, it
8 seems like there are multiple programs with different names and meanings, which adds to
9 the confusion when looking for energy assistance. A unified program that consolidates all
10 these services into one would solve this issue. It would make it much easier for people
11 like me to understand and access the assistance we need without the current confusion
12 and uncertainty.

13 The Commission should also ensure that DTE’s customers always know how
14 each of its programs works, in a proactive and frequent manner, unlike today’s reality.
15 Because I do not use my email frequently—as with many people in the community—
16 DTE should ensure that this kind of information is shared openly and frequently over the
17 phone and through mailed materials, in addition to email and online platforms. Currently,
18 it is a struggle to navigate through the bureaucracy and uncertainty of assistance
19 programs, and it often requires spending significant time on the phone seeking help.
20 While LSP has provided some relief during my enrollment periods, it has been difficult to
21 try to maintain financial stability and avoid falling into a crisis.

22 DTE can do much better for the people in the community. We often do not know
23 what it is doing. It needs to take the time to communicate with us and educate us about

1 what it is doing, especially regarding how customers can reduce the high bills that DTE
2 sends our way each month.

3
4 **B. Low-Income Self-Sufficiency Program**

5 **Q: Please your experience with LSP.**

6 **A:** With the help of the Michigan Department of Health and Human Services (MDHHS), I
7 enrolled in LSP in or around 2022. I have been enrolled in the program twice.

8 According to the Company, LSP is a “2-year payment plan for vulnerable families
9 at or below 150% Federal Poverty Level (FPL) to make affordable monthly payments
10 based on income and energy usage.”¹⁷ It attempts to do so by “eliminat[ing] any future
11 late payment charges” and freezing “past due charges . . . while the customer receives a
12 monthly arrears forgiveness credit.”¹⁸

13 Toward the end of my first two years, I learned that my enrollment was about to
14 end and that my bills were going to revert to the same amounts that I could not afford
15 prior to my LSP enrollment. “What is the next option?” I asked. But, based on the
16 responses from DTE and other organizations, it looked like there were no other options to
17 help pay down my bills. As a result, I ended up working with the St. Vincent de Paul
18 Society to re-enroll in LSP. Now that I have graduated for a second time, I am now trying
19 to work with St. Vincent de Paul again to extend my LSP enrollment for another two
20 years because it seems like there is still nobody with any other program in place for
21 people like me.

22

¹⁷ *Id.* at 8.

¹⁸ *Id.*

Q: DTE Electric reported a graduation rate for its LSP customers of 82% in 2021 and 81% in 2022,¹⁹ based on the number of customers successfully “avoiding disconnect due to missed payments.”²⁰ Would you describe LSP as a successful program?

A: No, I would not describe LSP as a successful program.

DTE’s current definition of “success”—avoiding a shutoff—is far too low of a bar. Said another way, approximately 18% of LSP participants experienced a shutoff by 2021 after two years in the program, and approximately 19% similarly experienced a shutoff by 2022.²¹ This fact is frustrating and disheartening. To begin with, no one should be shut off while already enrolled in a low-income assistance program—the point of the program is to help us better afford our bills; if it fails to do that, it is not a successful program. The current definition of success is flawed; we need a different metric.

A better metric of success would be whether LSP participants are able to afford their bills and are put in a place to afford their bills once they graduate. The current program is not structured to accomplish this. Before the changes to the LSP program that took place in the 2019–20 fiscal year, “LSP graduates were selected based on their account balance at the end of the fiscal year and not based on their time on the program.”²² However, now “customers are provided 24 months of eligibility on the program and graduation can occur for those customers who complete the 24 months even with a balance.”²³ This time restraint means participants will “graduate” from the program even if they are not able to pay down their existing balances or pay their full bill

¹⁹ *Id.* at 10 tbl.2.

²⁰ *Id.*

²¹ *Id.*

²² *Id.* at 11.

²³ *Id.*

1 in the future. Without LSP, my bills will be just as unaffordable as they were beforehand,
 2 even though I “graduated” and should be able to pay my bill according to DTE. When
 3 DTE touts that only 16% of its “graduates” return to the program within the next fiscal
 4 year,²⁴ it should not be seen as a success given that many “graduates” may yet return in a
 5 subsequent year once their past dues balance accrue again.

6 The MPSC’s Affordable Payment Plan Alignment subcommittee has rightly
 7 acknowledged that “new metrics to define success” are necessary.²⁵ The Commission
 8 should ensure that those changes are implemented now—as soon as possible.

9 Overall, DTE’s program has never made me feel like a “graduate.” The LSP
 10 program has helped me while I was enrolled, but it has not put me in a place where I can
 11 now afford my bills in the future.

12
 13 **Q: Please describe your experience trying to get re-enrolled in LSP for the second time.**

14 **A:** The process of re-enrolling in LSP has been difficult. I called DTE the week of April
 15 29th, for example, to try to get re-enrolled in the program, but the Company said I needed
 16 to go through other organizations to get enrolled. Over the course of thirty minutes,
 17 DTE’s customer service representative could not provide me with any information about
 18 whether or how I could re-enroll in LSP, nor did the representative answer any additional
 19 questions about LSP or other available low-income assistance programs. All she could do
 20 was tell me about BudgetWise and give me a list of organizations and their phone
 21 numbers. I felt as if she was saying, “You can get off the phone now. Hurry up. I have

²⁴ *Id.*

²⁵ *Id.* at 10. According to the Company, these new success metrics “will include the definition of graduation and plan success over multiple fiscal years.” *Id.*

1 told you all that I know.” DTE has testified that the Company has a “dedicated team of
2 customer advocates [] ready to assist customers while enrolled in LSP,”²⁶ but what about
3 after I have “graduated”? Based on my experience, DTE’s customer service
4 representatives have not been trained to support the needs of customers or answer basic
5 questions about the Company’s programs.

6 Since attempting to speak with DTE, I have been spending a lot of time following
7 up with different organizations. For example, I first reached out to MDHHS to request
8 assistance with my DTE bill, but the agency denied my request because I had not yet
9 received a shut-off notice. MDHHS only considers it an emergency and will help pay
10 your bill if you have received a shut-off notice and are in “shut-off status.” Next, I sought
11 the assistance of the Sugar Law Center for Economic and Social Justice, a local nonprofit
12 that assists low-income community members in obtaining the help they need. Sugar Law
13 then referred me back to the St. Vincent de Paul Society. In mid-June, I reached out to St.
14 Vincent de Paul. I submitted a request for assistance to re-enroll in the LSP program. The
15 organization advised me to wait two weeks for a response. As of July 17th—two months
16 after I initially “graduated” from LSP—I still have not heard back from St. Vincent de
17 Paul. In the meantime, I am proactively calling every few days, but not being back on
18 LSP in the meantime and not being able to get ahold of any organizations have been very
19 stressful. It seems like there is no in-person or one-on-one communication available. I
20 cannot just go into a building to talk to someone. I have to keep calling and hoping for a
21 response. If I do not hear back from St. Vincent de Paul, I am planning to call back to 211
22 United Way to see if there are any other programs out there that might help. I also may

²⁶ *Id.* at 8.

1 try to contact DTE again because I simply cannot afford the monthly bills they are
2 sending me.

3 DTE acknowledges that “[a]fter discontinuing the support of LSP, customers
4 often encounter difficulties in maintaining consistent monthly payments, leading to
5 potential crises.”²⁷ This is exactly what is happening to me and is what I suspect is
6 happening to many other “graduated” participants. In response to these difficulties, DTE
7 simply states that “[t]hese circumstances underscore the importance of exploring
8 affordable payment options that extend beyond the conventional 24 months and surpass
9 the 150% FPL requirements. Such solutions are crucial for customers facing long-term
10 financial constraints.”²⁸ As I explain below, the Company is correct when it suggests that
11 LSP is not an adequate solution for the many ratepayers struggling with energy
12 unaffordability; what is needed is affordable energy bills in the first place—or one central
13 assistance program that ensures ratepayers spend no more on their energy than they can
14 reasonably afford.

15
16 **Q: If you are unable to get back on the LSP program, are you able to afford your energy**
17 **bill?**

18 **A:** If I do not get back into the LSP program, it is going to be a challenge for me to manage
19 my bills. If I cannot get the help I need, I might end up receiving a shutoff notice. Then I
20 will have to work with MDHHS because I will again be in an emergency situation.

²⁷ *Id.* at 12 (“This challenge is particularly pronounced for individuals on fixed incomes, such as seniors, retirees, and minimum wage workers, who struggle to meet their financial obligations.”).

²⁸ *Id.* at 13.

1 It is just me managing these bills; I do not have family or friends to rely on
 2 financially. Maintaining a home, especially an older one with poor insulation, is not a
 3 joke. My fixed income does not stretch as far as I would like. I try my best to stay
 4 informed and involved in community meetings to find any assistance available. My main
 5 income comes from Social Security, so every dollar counts. Not being able to get back on
 6 the LSP program would significantly strain my budget.

7
 8 **C. Low-Income Assistance Credit**

9 **Q: Households with income at or below 150% FPL are eligible for the Low-Income**
 10 **Assistance (LIA) credit, but not all eligible customers are able to receive the LIA**
 11 **credit due to its limited enrollment.²⁹ What are your views on this policy?**

12 **A:** First of all, I had never heard of the LIA credit prior to developing testimony for the
 13 current set of DTE Gas and DTE Electric rate cases, which tells me that both companies
 14 are not educating residents on what these programs are and how they work. Second, it is
 15 frustrating that I may be eligible for a program yet not be enrolled in it. While I agree that
 16 LSP participants should still automatically receive the LIA, the Company should also
 17 enroll other LIA-eligible customers. The current policy seems to leave out many who
 18 could benefit from the LIA credit but are not currently enrolled in LSP or other
 19 programs.³⁰

²⁹ *See id.* at 17–18.

³⁰ The Company states that it “prioritizes customers who are enrolled in the Company’s [Affordable Payment Plan] or already receiving the RIA credit.” *Id.* at 17.

1 The Residential Income Assistance (RIA) credit, while helpful, currently provides
2 only about \$8.50 a month.³¹ This is significantly less than the \$40 you could get with the
3 current LIA credit. This means that even if you are eligible for the LIA credit, you might
4 be receiving the smaller credit unknowingly. It is frustrating that the policy seems to
5 create additional barriers rather than making it easier for all eligible households to receive
6 the help they need.

7 In my experience, navigating these programs and understanding the programs for
8 which I am eligible can be overwhelming, especially when the available information is
9 not clear. If the goal is to assist those in need, it would be better if the Company made the
10 policy more inclusive and made it easier for everyone who qualifies to automatically
11 access the credit without additional hoops to jump through. It is an insult to start a
12 program but not accommodate everyone who qualifies for it. Why start a program if you
13 cannot serve all the people who need it?

14 Lastly, I note that it is not at all clear how some customers are able to get on the
15 LIA credit while others are not. In one place in its testimony, the Company states that it
16 “prioritizes customers who are enrolled in the Company’s [Affordable Payment Plan,
17 which includes LSP] or already receiving the RIA credit.”³² The Company also states that
18 there are “several ways a customer may receive the LIA credit,” stating that one way is
19 that LSP graduates “may continue to receive the LIA credit if maintaining their low-
20 income eligibility status.”³³ Separately, the Affordability, Alignment, and Assistance

³¹ *Id.* at 15.

³² *Id.* at 17.

³³ *Id.* at 18.

1 subcommittee of the Energy Affordability and Accessibility Collaborative reported in
 2 May 2023 that the Company “historically” prioritizes “seniors receiving RIA” and
 3 “[s]ometimes” prioritizes “call-ins.”³⁴ It is not clear to what extent each of these groups is
 4 prioritized. For example, does this mean that I will be more likely to receive the credit if I
 5 call DTE and specifically ask for it as a “call-in”? That seems unfair, given that others
 6 will be unaware.

7 Moreover, it is really frustrating and insulting that I have previously asked DTE
 8 representatives about whether any assistance programs beyond LSP are available but
 9 have only ever been informed about BudgetWise, as mentioned above—despite being
 10 someone who recently graduated from the LSP program and a senior who has called DTE
 11 representatives seeking assistance. I seemingly fit into the categories of customers that
 12 the Company priorities for LIA, but the Company has never mentioned the LIA credit to
 13 me. They also say they do not advertise the program because they cannot give the credit
 14 to everyone who is eligible. That is just infuriating. It makes no sense to create a program
 15 and then not inform the very people it is supposed to help.

16 In the inner city of Detroit, it is not uncommon to be told about new programs
 17 with so much promise, but then to be told there is no money left. It is frustrating when I
 18 am told that these programs are full or out of money—it leaves me feeling stuck. That
 19 seems to be what DTE is claiming here—that we are stuck with a limited enrollment

³⁴ AFFORDABILITY, ALIGNMENT, AND ASSISTANCE SUBCOMM., MICH. PUB. SERV. COMM’N, 2023-05-23 AAA MEETING WITH NOTES (2023) (available at <https://www.michigan.gov/mpsc/-/media/Project/Websites/mpsc/workgroups/eaac/AAA-Subcommittee/2023-05-23-AAA-meeting-with-notes.pdf?rev=3985179346c946f1be99da78f4a1cb7b&hash=A6E9968C4A5FCBF8AD75A217F22EC9AA>) at 22.

1 program. But all the enrollment expenses are covered by us, the ratepayers. Ensuring that
2 all low-income customers are able to get the help for which they are eligible is a worthy
3 investment that the Commission should approve and DTE should implement
4

5 **Q: DTE has proposed increasing the LIA credit from \$40 to \$50.³⁵ What are your views**
6 **on this increase?**

7 **A:** I see the proposed \$10 increase as a positive change. A \$10 increase in the credit would
8 mean my monthly bill would be \$10 lower, which is significant for someone on a fixed
9 income like me. Any reduction in my utility bills will help me better handle my budget. If
10 I were receiving the credit still, an increase in the credit now would have provided me
11 with some immediate, welcomed relief.

12 That being said, a \$10 increase is still a drop in the bucket compared to the kind
13 of change needed to make my bills truly affordable. And if DTE is raising its rates and
14 this \$10 is just covering the increase, then the additional \$10 does not make things any
15 better for me than they are right now.
16

17 **D. BudgetWise**

18 **Q: Please describe your experience with the BudgetWise program.**

19 **A:** Overall, my experience with BudgetWise has been poor. I first enrolled in the BudgetWise
20 program in 2000. When my mother passed and I became the DTE customer, the DTE bills
21 were too high. I reached out to DTE over the phone, and the only program they told me
22 about was the BudgetWise program. I enrolled.

³⁵ Sparks Direct Testimony at 19.

1 The BudgetWise program has a settlement month charge, where DTE reviews my
 2 account and settles the difference between the energy I used and the money they charged
 3 me. The settlement month charge is really challenging and stressful. Once a year, I have to
 4 figure out where I am going to get the extra \$300 or \$400 to pay my remaining bill in order
 5 to get re-enrolled in the program. The settlement charge is not affordable. It stresses people
 6 out.

7 I will note that when I “graduated” from the LSP plan in April of 2024, DTE
 8 “automatically enrolled [me] in [the] BudgeWise Billing program” without consulting with
 9 me.³⁶

11 **IV. SHUTOFFS**

12 **Q: Do you ever have trouble paying your bill each month?**

13 **A:** Yes. Sometimes I cannot pay my bill in full. I manually pay online every month rather
 14 than pay my bill through automatic payments so that I can control when money is leaving
 15 my bank. Plus, they charge a fee just for using the machine, which I find ridiculous. Why
 16 should I have to pay a fee to use a machine?

17
 18 **Q: Have you ever received a shutoff notice or had your electric service shut off for**
 19 **nonpayment?**

20 **A:** I have never had my electricity shut off, but I have received at least two shutoff notices
 21 between 2000 and now. Receiving a shutoff notice in the mail is a real shocker. It is
 22 something you never want to see.

³⁶ Ex. DAO-317.

1 The first thing I do when I get one is call MDHHS. Last time, the agency fixed it
2 for me after a couple of days. It sent the payment over to DTE, and I paid the remaining
3 balance before my service would have been shut off. MDHHS did not request me to pay
4 it back for its portion.

5 The experience of working with MDHHS was incredibly stressful. The wait, the
6 time, wondering who is actually going to help you—it is panic-inducing to think you are
7 going to be left without electricity with such short notice. You sit there thinking, “What is
8 taking so long to help me pay this bill?”

9 For elderly people, it is an especially nerve-wracking process because the process
10 has moved online. We used to go into the MDHHS office for help, but now it is all
11 online. Many elderly people do not know how to use laptops or smartphones, so getting
12 the message through to get help is even harder. It is all online forms and paperwork, and
13 you cannot speak with anyone directly.

14 Now, it is also the law that DTE cannot shut off the lights or gas in the winter for
15 certain residents such as seniors. Because I am a senior, that makes me feel relieved
16 because I do not have to worry about losing power during the coldest time of the year. I
17 think that is important.

18
19 **Q: Did you ever contact DTE directly about the shutoff notices or did you go directly to**
20 **the MDHHS?**

21 **A:** When I received my shutoff notices, I always went straight to MDHHS because that is
22 what DTE would have told me to do anyway. The first time I received a shutoff notice, I
23 knew from talking to others that DTE would not help. I know people in my community

1 who have had bad experiences trying to get help from DTE after receiving a shutoff
 2 notice, and that is why everyone goes straight to MDHHS. It is well known in the
 3 community that DTE does not provide much assistance in these situations. The Company
 4 wants the whole payment and is not interested in partial payments. That is just the way it
 5 operates, so I did not bother to reach out to DTE directly.

6
 7 **V. TIME-OF-USE PRICING**

8 **Q: Are you currently enrolled in time-of-use pricing?³⁷**

9 A: It is not clear to me whether I am on time-of-use (TOU) pricing currently, but I believe I
 10 may be on it now that I have graduated from LSP. Prior to graduating, I believe I was on
 11 the D1.6 low-income rate, which the Company is proposing to retire.³⁸ I am worried
 12 about the switch from the D1.6 rate to TOU because I cannot afford potentially higher
 13 bills under time-of-use pricing.

14
 15 **Q: What are your views on peak pricing hours?**

16 A: Overall, I worry that my bills will be more expensive under peak pricing than without it.
 17 Under the TOU rate schedule, peak hours in Detroit—from 3 PM to 7 PM on
 18 weekdays—are the most expensive times to use electricity.³⁹ However, peak pricing does
 19 not take into account real-life needs and schedules for cooling and heating, especially for
 20 retired residents, families with those too young to attend school, and other residents who

³⁷ DTE recently transitioned most of its customers to TOU pricing following the Commission's approval in 2022. *In re DTE Electric Co.*, MPSC Case No. U-20836, Order (Nov. 18, 2022), at 400.

³⁸ Willis Direct Testimony at 22; Sparks Direct Testimony at 19.

³⁹ Ex. DAO-318, *Time of Day 3 p.m. - 7 p.m.*, DTE ENERGY (last accessed July 9, 2024) (available at <https://solutions.dteenergy.com/dte/en/Products/Time-of-Day-3-p-m---7-p-m-/p/TOD-3-7>) at 1.

1 do not have an in-person job for most hours of the weekday. I find the whole idea of
2 managing energy use around “peak hours” quite challenging. DTE suggests saving
3 money by not running major appliances, but this is often not possible or practical for me.
4 People just want to stay cool, or get things done as needed, and not everyone can easily
5 adjust their routines. In some ways, TOU pricing seems akin to living under a
6 dictatorship; it is unnecessarily restrictive and punitive.

7 First, TOU pricing poses a significant challenge during the summer when we need
8 to run air conditioning to keep our homes at bearable temperatures. It is not practical or
9 reasonable to avoid using air conditioning during the hottest parts of the day. Because I
10 cannot go without electricity when I am at home and because I am home often as
11 someone who is retired, I fear that TOU pricing will be more expensive than the D1.6
12 rate.

13 Second, I do not even have many other large appliances that would allow me to
14 reduce my usage in the first place. For example, I do not have a dishwasher; I wash my
15 dishes by hand. While I do have a clothes washer and dryer, I just wash my clothes when
16 I need to, and it does not always fit neatly around these peak hours. If I were to plan
17 around peak hours, it would be a huge adjustment, especially because there are so many
18 other things going on in my life.

1 **VI. CUSTOMER SERVICE AND COMMUNITY ENGAGEMENT**

2 **Q: Has DTE ever proactively contacted you about a problem with your electric service**
3 **or bill?**

4 **A:** No, DTE has never proactively reached out to me about any issues with my electric
5 service or bill. At this point, I do not expect the Company to reach out; I understand that I
6 need to take the initiative for any actions related to my bill and service.

7
8 **Q: How frequently have you had to call DTE Electric about your bill or service?**

9 **A:** Besides calling DTE about re-enrolling in LSP, I believe the last time I called DTE about
10 a problem with electric service was about a power line issue. That was around 2021 or
11 2022, when I was experiencing flickering lights in my house. Beyond the problems with
12 LSP and my flickering lights, I usually call DTE Electric once a year, typically at the end
13 of the year, to find out the total amount for the Home Heating Credit. That is the main
14 reason I call DTE most years.

15 I also try to contact DTE for community-related matters, like when the Company
16 is offering residents items such as energy efficiency products (e.g., night lights) or
17 offering a service such as appliance tune-ups. That is one of the only other reasons I ever
18 call DTE. However, for the energy efficiency products, I learned that residents can only
19 receive these products once. I received some energy efficiency products sometime
20 between the 2000s and 2010s, and DTE has it on record that I cannot apply for any more
21 benefits through them because I received these products already. It is a one-time deal. I
22 am not sure what will happen if my current products break or eventually become too old.

1 **Q: Have you used any of DTE’s self-service or online tools?**

2 **A:** No, I generally do not use DTE’s self-service or online tools since I am less familiar with
3 how they work as a senior. I understand that DTE Electric is requesting recovery of \$10.7
4 million of IT Capital for Collection digital self-service.⁴⁰ However, I am worried that the
5 Company will reduce the number of DTE representatives available over the phone or in
6 person as a result. The Company seems to suggest that it may reduce the number of
7 customer service representatives once it rolls out its digital products.⁴¹ The Commission
8 should ensure that DTE’s call support is not negatively impacted by its proposed digital
9 investments.

10

11 **Q: Do you have any concerns regarding community engagement by DTE and the**
12 **Commission?**

13 **A:** I have sometimes sensed a reluctance from DTE and Commissioners to engage directly
14 with our community. This lack of direct communication leaves us wondering who to hold
15 accountable for decisions affecting our neighborhood. That’s why it’s important for DTE
16 and the Commission to engage with our communities more directly and frequently. I
17 would encourage DTE representatives and Commissioners and their staff to attend more
18 community meetings so that they can keep residents apprised of key information and
19 listen to our concerns.

20 In the past, I have found it helpful when a DTE representative has attended
21 community meetings. For example, at one meeting hosted by We Want Green, Too, we
22 discussed various issues affecting our community with DTE. During that meeting, I

⁴⁰ Hatsios Direct Testimony at 20–21.

⁴¹ *See id.* at 11–12, 23.

1 expressed concerns about the lack of education for residents regarding the old substation,
2 which is now boarded up and not maintained. I questioned what DTE plans to do with the
3 old building and emphasized the need for it to be cleaned up and secured. We also talked
4 about recent changes in our neighborhood, such as new poles, wires, and transformers,
5 and I raised concerns about reliability during storms.

6 Additionally, I attend monthly community meetings hosted by nonprofits such as
7 GenesisHOPE, the Michigan Environmental Justice Coalition, and We the People
8 Michigan. These meetings provide an opportunity to bring up concerns about things like
9 pole placement, line installations, and transformer reliability. A DTE representative
10 usually attends some of these gatherings and updates us on the Company's activities in
11 our area. These types of meetings are crucial for keeping residents informed and ensuring
12 DTE is aware of our concerns.

13 Despite attending some of these meetings, there seems to be a communication
14 gap; the Company does not always inform us about what is happening. For example,
15 DTE should better communicate about issues in the neighborhood, like maintenance or
16 changes to power lines. This kind of information is critical, especially in the summer
17 when electricity is so essential for cooling. Currently, I am frustrated by the number of
18 trees the Company suddenly destroyed and the number of new overhead poles it installed
19 on our street in their place. This happened around May or June of this year. No one
20 explained why this suddenly happened, and we were not notified beforehand. It would
21 have been helpful to understand the reasons behind these changes and when they were
22 planning to do it.

1 **Q: Do you have any other concerns regarding DTE's customer service?**

2 **A:** Yes, I am worried that the Company is not transparent about how programs like Surge
3 Protection Plus (SPP) and the Home Protection Plus (HPP) work.

4 For example, I am supposed to be enrolled in Surge Protection Plus (SPP), but the
5 entire process has been confusing. I decided to enroll after a lightning strike hit a
6 neighbor's home in the 1990s, causing a fire. During the course of providing this
7 testimony, I learned that I am probably enrolled on a meter-based device SPP plan, which
8 costs about \$10 per month. However, when I signed up for SPP, I was not told of any
9 other SPP options. The DTE representative enrolled me in the \$10 per month program
10 but did not break down the different plans when introducing me to the program. I did not
11 realize there were cheaper options, like a \$7 plan. It would have been helpful to
12 understand all the options before deciding.

13 Similarly, prior to testifying in this case, I did not know that there were different
14 HPP plans available. Since around 2000, I have been enrolled in HPP. I recently learned
15 that I am on the Ultimate Plan, which costs \$35 per month and covers repairs for various
16 appliances. However, when I enrolled, I did not know DTE offered multiple HPP
17 payment plans.

18

19 **Q: Does this conclude your written Direct Testimony?**

20 **A:** Yes.

1 MR. TEMPLETON: Lastly, your Honor, I
2 move on behalf of the Detroit Area Advocacy Organizations
3 to bind in the Written Direct Testimony of Delores Orr.
4 Ms. Orr's written direct testimony consisted of one cover
5 page and 16 pages of questions and answers. Ms. Orr
6 sponsored Exhibits DAO-321 through DAO-323, inclusive,
7 and I move to admit those exhibits as well.

8 JUDGE WALLACE: Thank you, Mr. Templeton.
9 Is there any objection to binding in the testimony of
10 Ms. Orr?

11 Hearing none, the testimony is bound in.

12 Is there any objection to the admission
13 of Exhibits DAO-321 through DAO-323?

14 Hearing none, those exhibits are
15 admitted.

16 (Testimony bound in.)

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STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of DTE	)	
ELECTRIC COMPANY for authority to	)	Case No. U-21534
increase its rates, amend its rate schedules	)	
and rules governing the distribution and	)	ALJ Sally L. Wallace
supply of electric energy, and for	)	
miscellaneous accounting authority.	)	

DIRECT TESTIMONY OF DELORES ORR

ON BEHALF OF

**DETROIT AREA ADVOCACY ORGANIZATIONS
(SOULARDARITY AND WE WANT GREEN, TOO)**

July 26, 2024

1 **I. INTRODUCTION & SUMMARY**

2 **Q: Please state your name, occupation, and address.**

3 **A:** My name is Delores Orr. I am retired and served as a Vice President of the East Village
4 Association and President of the Cadillac Blvd. Block Club. My address is 1378 Cadillac
5 Boulevard, Detroit, MI 48214.

6
7 **Q: Have you participated in any previous MPSC proceedings?**

8 **A:** No.
9

10 **Q: Please describe your education and professional background.**

11 **A:** I graduated from Southeastern High School in Detroit and attended Detroit Business
12 Institute in about 1967 or 1968. Professionally, I have held roles at General Motors,
13 where I focused on community relations, and later at the Michigan Department of Health
14 and Human Services in the children's department. In that role, I would look after children
15 while a parent or guardian met with a social worker. Since retiring, I have devoted much
16 of my time to several local community organizations, including the Eastside Community
17 Network, East Village Association, and Cadillac Blvd. Block Club.

18
19 **Q: Please describe your involvement in the community over the last decade.**

20 **A:** Around 2010, I joined the Eastside Community Network (ECN) as a community member,
21 and later I became a steering committee member. ECN primarily leads efforts on climate
22 equity, community economic development, sustainable housing, community wellness,

1 and youth development to “promote social cohesion, neighborhood sustainability,
2 community participation, and resident empowerment.”¹

3 In approximately 2015, I started volunteering with the East Village Association
4 and have since joined its board as vice president. The mission of the East Village
5 Association is to bring the community together for the enjoyment of the East Village and
6 to ensure our voices are heard. In recent years, we have established a community park
7 and garden; looked at things like the water rates, DTE rates, and alley lights to make sure
8 that people can keep their homes and stay in our community; advocated for community
9 resources and involvement in local development projects; done a lot of outreach to
10 elected officials and attended City Council meetings; and organized seasonal celebrations
11 like Christmas events with community giveaways. Since turning our attention toward
12 developers purchasing vacant lands in our community, we have also established a
13 community land trust to ensure the community can be part of purchasing the land and has
14 a say in how the land is used, and I serve on this committee. Separately, we are also
15 applying for a grant for bike racks in the community.

16 Around 2020, in response to the COVID-19 pandemic, I re-established the
17 Cadillac Blvd. Block Club to provide resources and support to Eastside community
18 members. For example, we participated in a sidewalk program to direct the city’s
19 attention to needed repairs, and we are currently working with community members to
20 support women entrepreneurs in the neighborhood. We have also previously helped some
21 residents restore their heat after DTE Gas had shut off service, although this is an
22 ongoing project as the family still only has heat on one floor of their home. I continue to

¹ Ex. DAO-321, *Who We Are*, EASTSIDE CMTY. NETWORK DETROIT (last accessed July 18, 2024), <https://www.ecn-detroit.org/mission-and-history> at 2.

1 work with DTE and other contacts to resolve this issue fully before winter sets in.

2 Beyond this, we help different families each year during Christmas by providing food,
3 clothes, beds, and other necessities, often in collaboration with local schools and social
4 workers.

5 Outside of the three above organizations, I also volunteer at my grandson's school
6 and am active in my church community.

7
8 **Q: Are you a DTE customer?**

9 **A:** Yes, I am a DTE Electric and DTE Gas customer. I first became a DTE Electric account
10 holder in 1969 and have always been with DTE for my electric service. As of July 20th, I
11 am living alone. However, three of us lived in my home for a few years—my daughter,
12 my grandson, and me. My daughter bought a house down the street during COVID-19,
13 but she has had a Section 8 tenant who only recently moved out. It took her three years
14 and numerous court battles to get the tenant out finally. So, my daughter and grandson
15 were staying with me temporarily. Now, it is just me in the household.

16
17 **Q: Please describe your overall experience as a DTE Electric customer.**

18 **A:** Overall, my experience as a DTE Electric customer has not been desirable to me and has
19 been rocky at best. As described below, while DTE offers various programs, they tend
20 not to meet my needs. One of the significant issues I face is DTE's lack of promptness in
21 resolving issues, such as when I need help with my bills or there is a power outage in my
22 neighborhood. These challenges make it very frustrating and difficult to deal with DTE. I

1 am testifying so the Commission can consider these experiences as it evaluates the
2 Company's current rate request.

3
4 **Q: How have you organized your testimony?**

5 **A:** I have organized my testimony as follows:

6 Part II: Power Outages;

7 Part III: Financial Assistance;

8 Part IV: Shutoffs;

9 Part V: Home Protection Plus; and

10 Part VI: Customer Service.

11
12 **Q: Are you sponsoring any exhibits?**

13 **A:** Yes, I am sponsoring the following exhibits.

14 DAO-321. *Who We Are*, EASTSIDE CMTY. NETWORK DETROIT (last accessed July 18,
15 2024), <https://www.ecn-detroit.org/mission-and-history>

16 DAO-322. DTE Electric's Response to DAAO's Third Discovery Request,
17 DAAODE-3.4c

18 DAO-323. Bill from DTE to Delores Orr (Jan. 31, 2024)

19
20 **II. POWER OUTAGES**

21 **Q: How often do you experience power outages?**

22 **A:** We have had power outages throughout the winter every year and in the summer every
23 year. It goes out so often—and sometimes for days. It does not make sense. Within the

1 last year alone, I have experienced at least four or five power outages. It seems that
2 whenever the wind blows, the power goes out. It happens more often than you would
3 think and is always unexpected. When my power goes out, I hear the neighbors always
4 yell, “Is your power out too?” And then we remind each other to report the outage to
5 DTE. Once we’ve contacted DTE, the Company seems to always report that the outage is
6 something about a transformer that blew out, a storm downing lines, or an accident
7 hitting a transformer. There’s always something.

8
9 **Q: Can you describe your experience with power outages?**

10 A: It is one of the worst things that can happen during the winter because I cannot heat my
11 home. And it seems the outages always occur in the winter. It is hard to survive without
12 heat. I have a wood-burning furnace that I can turn on to heat my home. I purchase wood
13 every year (and sometimes receive wood donations) so that I can light my fireplace in the
14 winter—largely in anticipation of outages. Even with the fireplace, it is easy for the heat
15 to escape, and it won’t reach rooms like my bedroom. I try to use many blankets when
16 outages occur, but the blankets cannot keep you fully warm. I bring out a tarp to help
17 retain heat in the winter if necessary.

18 Moreover, I cannot open my fridge, cook with my stove, or do almost anything
19 else. If there is an outage in the entire area, there are no restaurants from which we can
20 order food. I had to cook in a pot over my fireplace once because the power went out.
21 But, if the outage lasts a few days, I will lose food, making it difficult to cook.

1 **Q: Do you have a backup generator?**

2 **A:** No, I do not have a generator. There are many people like me without a generator—and
3 many without a fireplace. I have no idea how to use a generator. I do not understand how
4 you set it up outside or connect it to the house. I have never attempted to use one.
5 Because of these barriers, I have not been able to consider getting a generator seriously.
6 There is not much I can do, so I just make do with my wood-burning fireplace and
7 flashlight; I hang curtains in the living room where the fireplace is in order to keep warm
8 in the winter when there are outages, and I hope the power comes back on soon.

9

10 **Q: Have you received outage credits from DTE?**

11 **A:** No, not that I can recall. I remember that DTE said in the past that we could receive an
12 outage credit if we mailed something, but I mailed in my documents and never got
13 reimbursed. But I understand that the outage credit rules have changed since then, so
14 outage credits are now automatic after a certain period. The Company should give
15 residents a meaningful amount back to compensate for the outage's costs and burdens.

16

17 **Q: While DTE Electric currently pays for outage credits out of its profits, the Company**
18 **has requested that ratepayers pay for outage credits “caused by events outside DTE**
19 **Electric’s control.”² Do you have any concerns with this request?**

20 **A:** Yes, I have significant concerns with this request. It seems entirely unreasonable
21 to ask ratepayers to bear the cost of outage credits. Why should we, the customers, have

² Crozier Direct Testimony at 31.

1 to pay for outages that result from their faulty equipment or extreme weather events,
2 events that are 100% out of the customers' control?

3 Currently, DTE covers these costs from their shareholder profits, which is fair
4 since they provide the service. If they want to raise rates and make us pay for outages, it
5 feels like they are trying to shift their responsibility onto us. It is particularly suspect that
6 the Company does not know how this request will impact ratepayers; it claims it has not
7 "forecast outage credit payments and therefore cannot provide an expected ratepayer
8 impact."³ We already pay enough for their services, and it seems unjust to ask us to cover
9 additional costs, especially when we're the ones suffering during these outages.

10 It is also concerning because if DTE starts charging ratepayers for these credits,
11 how will we know if the charges are justified? They could bill us whatever they want,
12 and we would have no way to verify if the amount is accurate or fair. This proposal just
13 does not seem right, and I do not think any ratepayer would agree to it.

14
15 **III. FINANCIAL ASSISTANCE**

16 **Q: In your opinion, are DTE Electric's monthly bills affordable?**

17 **A:** No. They are not affordable, and I believe DTE is not concerned about the affordability
18 of our bills. I am always the one who needs to reach out for help if I am struggling to pay
19 the bill, and they have never given me any leeway when it comes to being late on a
20 payment. If I do not make a payment, I know the Company will shut off my electricity. I
21 do not think they care at all about anything but the money.
22

³ Ex. DAO-322, DTE Electric's Response to DAAO's Third Discovery Request, DAAODE-3.4c, at 1.

1 **Q: Do you have any concerns about the approximately 10% residential rate increase⁴**
2 **that the Company is requesting?**

3 **A:** Yes, it is ridiculous. How can they justify asking for such a large increase without
4 understanding or communicating the impact it will have on us? It feels like they are
5 asking us to blindly trust them with our money, and that is not acceptable. We ratepayers
6 deserve to know exactly how our rates will be affected and why.

7
8 **Q: Are you enrolled in any DTE low-income assistance program?**

9 **A:** No, I believe I am not currently enrolled in any DTE low-income assistance program. I
10 was previously enrolled in the Low-Income Self-Sufficiency Plan (LSP), but I am no
11 longer in the program. DTE graduated me out of LSP.

12
13 **Q: How did you first enroll in LSP?**

14 **A:** I first learned about LSP around 2017 when the Accounting Aid Society was helping me
15 file my taxes. The organization had literature about the program, and I discussed it then.
16 Through DTE, you very seldom hear about these programs unless you call someone to
17 talk or find someone in person. The Company does not really advertise them well; it
18 rarely tells you anything that is happening, and it seems like there are very few programs
19 that DTE brings to the community. So, I had to take the initiative to find out more about
20 LSP. Later that year, I attended a DTE community resource fair, possibly hosted by East
21 Side Community Network, where the Company had a table accepting applications.

⁴ Attachment 2 of DTE Electric's Application in this case shows that the Company is seeking a 9.6% increase in residential rates (line 10, column e), the bulk of which comes from the increase in the Time of Use rate (line 7).

1 **Q: Please describe your experience in the LSP.**

2 **A:** Honestly, the whole experience has been a bit of a rollercoaster. I am not in the LSP
3 anymore; they graduated me from the program in 2022. I've been in the LSP program at
4 least twice. When DTE first released me from the program a couple of years ago, I tried
5 to rejoin immediately because I needed the support. I could not pay my bills without it,
6 and I was worried about what would happen if I was not able to get back into LSP. If I
7 recall correctly, I was volunteering at a Salvation Army event, and some DTE
8 representatives were present. They talked about the LSP there, so I applied right there to
9 re-enroll. For this reason, I try to attend as many community events and fairs as I can
10 because it is where I get most of my information and support. It feels like you have to be
11 proactive and seek out help because DTE doesn't make it easy.

12
13 **Q: Did DTE notify you of your graduation? How do you feel about you being considered**
14 **a successful “graduate” of LSP?**

15 **A:** Yes, they informed me that I had graduated from LSP through a letter in 2022, I think it
16 is quite silly and a very low bar for DTE to consider me a successful “graduate” just
17 because I have not been shut off in 24 months. My income and lifestyle have not
18 significantly changed, and the small increase in Social Security I received is not enough
19 to cover what LSP used to cover. To me, a successful low-income assistance program
20 should provide ongoing support until there is a real and sustainable improvement in a
21 person's financial situation. It should consider whether people can afford their bills
22 without assistance, not just whether they have managed to avoid shutoffs for a certain
23 period. True success means being able to pay for utilities comfortably without having to

1 choose between electricity and other essential needs like food or medication. Either way,
2 no customer should be “graduated” without being able to prove that they can support
3 themselves, and they should be notified well in advance.
4

5 **Q: Do you plan to try to re-enroll in LSP in the future?**

6 **A:** I will assess how things go this winter while I am alone in the house. If I find the need to
7 reapply, I will. With this upcoming winter, I know how crucial that support is, so I may
8 reapply. The LSP program has been a lifeline for me, helping me manage my bills and
9 keep my services on so I really appreciated the help it provided me.
10

11 **Q: Are you aware that DTE offers a Low-Income Assistance (LIA) credit to certain**
12 **eligible customers?**

13 **A:** No, I was not aware of the specifics of LIA credit before. However, after looking at my
14 bills, I did notice a \$40 credit listed as “Special Low-Income Credit.”

15 I did not apply for anything, so I assumed it was automatically applied to my
16 account. I think it is great that DTE provides this credit, but it would have been helpful if
17 they had clearly communicated this to me. I just thought it was available for seniors, and
18 I did not know it was part of a specific program. Better information and communication
19 about these assistance programs would make a big difference for customers like me.

20 I could not afford my bills without the LIA credit, especially during winter. I must
21 manage my payments very carefully, using my pension and Social Security checks to pay
22 part of the bill at the beginning of the month and the rest later. Without that \$40 credit, I
23 would struggle even more, and keeping up with my bills would be a real challenge. I am

1 lucky to have been in the program, even if I did not realize it. If DTE could make these
2 credits more accessible and easier to understand, it would greatly help those of us trying
3 to manage our utility bills on fixed incomes.

4
5 **Q: Are you currently enrolled in BudgetWise?**

6 **A:** No, I am not currently enrolled, but I was in the past for one year in 2021.

7
8 **Q: Describe your experience with BudgetWise.**

9 **A:** My experience with BudgetWise was disappointing, and ultimately, I would never enroll
10 in the program again. The program promised lower, more stable bills during certain
11 months, but it ended with a significant balloon bill during my settlement month—though
12 I had to pay this much bigger bill by the normal monthly payment deadline. This
13 approach was not budget-friendly for me because I received unexpectedly high settlement
14 month bills that were blatantly unaffordable.

15 During my time with BudgetWise, there were occasions when I received
16 unexpectedly high bills, which I attributed to adjustments due to seasonal changes in
17 electricity usage. When I reached out to DTE about these high additional amounts, their
18 response was unhelpful. They simply informed me that I needed to pay the amount due
19 without offering any assistance or solutions.

1 **Q: Do you have any recommendations regarding the Company's BudgetWise program**
2 **to help the program better work for you and others like you?**

3 **A:** If DTE is going to have a BudgetWise program, it should avoid having a lump sum
4 payment at the end of the program. That kind of setup can be very stressful and difficult
5 to manage. Instead, the program should offer a more predictable and consistent plan. A
6 structure that prevents a large settlement payment would be much more helpful for
7 people in my situation.

8
9 **IV. SHUTOFFS**

10 **Q: Have you ever experienced a shutoff of electric service for nonpayment?**

11 **A:** Yes, I experienced a shutoff for nonpayment around fifteen years ago in my current
12 duplex. It was a very challenging time. I remember everything was shut off—no lights or
13 heat. My electricity and gas were off for a few weeks, if not longer. It was especially hard
14 to survive without heat as it gets so cold here. I had to use candles, flashlights, and a tent
15 to stay warm. It was rough. It was a real problem at night because of how hard it was to
16 deal with the darkness and cold. I had to go to bed earlier. Without electricity, I also
17 could not really cook, and I lost a lot of food. DTE put me on a payment plan after that
18 instance.

19
20 **Q: What can you tell us about your experience receiving any shutoff notices?**

21 **A:** I have received shutoff notices a few times, particularly when I struggled to pay the full
22 amount at once. It is not a frequent occurrence, but when it happens, it adds a lot of stress
23 and uncertainty to an already difficult situation. I know I have limited time to come up

1 with the money to avoid losing power. Even if I manage to pay it off in time, it is a
2 constant worry and a race against the clock. The notice reminds me of how precarious the
3 situation is and how close I am to losing essential services.

4 I most recently received a notice for nonpayment last year during the winter—and
5 while I was enrolled in LSP—because I could not pay the full amount at once. I paid
6 what I could at the time. Even though I received a shutoff notice, I managed to pay it off
7 a few days before the proposed shutoff date. It was a close call. I was just a few days
8 away from not meeting the Company’s “success” metric for LSP.

9
10 **V. HOME PROTECTION PLUS**

11 **Q: Are you currently enrolled in Home Protection Plus?**

12 **A:** Technically, yes, I am. I joined on July 16, 2020, so I have been enrolled for about four
13 years. However, this might be the last time I enroll.

14 I was taken off the plan for nonpayment because you have to pay the Home
15 Protection Plus separately and call that number directly. If you have a bill owing and it
16 says \$320, it does not tell you right there that it is not \$320—it is \$320 minus the \$89 for
17 the Home Protection Plus. You have to figure it out yourself. If you pay the \$320, DTE
18 will not send that \$89 to Home Protection Plus.⁵ That is how I ended up off the program.
19 DTE did not pay the money to Home Protection Plus. That is when I was told to make
20 Home Protection Plus payments directly to them. You just need to know to do that.

21

⁵ See Ex. DAO-323. Bill from DTE to Delores Orr (Jan. 31, 2024).

1 **Q: Can you describe your overall experience with the Home Protection Plus program?**

2 **A:** My overall experience with the Home Protection Plus program has been mixed.

3 On the positive side, I have had my bathroom sinks get new faucets, which was
4 helpful. There was also a time when my freezer/icemaker was not working, but the on/off
5 button had been accidentally turned off. The representative came and turned it on, but it
6 still counted as an occurrence even though nothing was broken; the button simply had
7 been switched off. I also had some electrical work done with the outlets. My fridge went
8 completely out, and they gave me \$500 for a new refrigerator through their “green bucks”
9 program.

10 However, I lost food twice while waiting for DTE to arrive and try to repair the
11 refrigerator, and I did not get anything for that, which was a bad experience; also, \$500
12 simply is not enough for a new refrigerator. You do not use the service every month, and
13 sometimes you might not call them out for anything during the year. They also used to
14 allow more work orders, but now they limit you to around ten calls per year, and each
15 occurrence is counted separately, which makes it less beneficial.

16

17 **Q: Have you encountered any issues or challenges while being enrolled in the Home**
18 **Protection Plus program? If so, could you describe them?**

19 **A:** Yes, I have encountered a few issues. One major challenge was being removed from the
20 program for nonpayment because I did not realize I had to pay the Home Protection Plus
21 separately, as DTE did nothing to make me aware. Additionally, there were frustrations
22 with the service limits and losing food due to delayed repairs. However, apart from these,
23 I have not faced any other major issues, and I continue to be enrolled in the program.

1 Being older, I have a sense of security knowing that if I have an issue, I can call, and it
2 will eventually be fixed.

3
4 **VI. CUSTOMER SERVICE**

5 **Q: Describe your experience contacting DTE Electric to resolve issues with your**
6 **electric service or bills.**

7 **A:** My experience with contacting DTE Electric has not been good. It is hard to get in touch
8 with customer service. I get more answers if I attend a meeting or find out when one of
9 the community partners and DTE representatives will be there. That is the only way I
10 have ever gotten the answers I needed from them. Over the phone, it sounds like they are
11 not interested in helping you—almost as if they were asleep on the other end. For
12 example, on July 2nd, I was on hold for thirty minutes and never managed to speak to
13 anyone. Often, you get put on hold or told to wait for a callback that might not come.
14 When this happens, I usually try calling a different department and hope they can connect
15 me to the right person.

16 Overall, DTE is not very communicative. DTE has fairs, and while I try to attend
17 many of them, they are seldom run by DTE, but they will usually have a booth at an
18 existing resource fair.

19
20 **Q: How frequently have you had to contact DTE Electric about a problem?**

21 **A:** If something is going on, I have to call them more than once. But I do not like to call
22 because I often stay on hold for thirty to forty minutes. I know if I hang up, I will have to
23 start all over again. In my experience, even if you leave a number for a callback, nobody

1 calls back most of the time. Of course, if you are calling to make a payment over the
2 phone, it is much different. The representatives are very prompt then.

3

4 **Q: Does this conclude your written Direct Testimony?**

5 **A: Yes.**

1 MR. TEMPLETON: Great. And with that,
2 your Honor, the Detroit Area Advocacy Organizations rests
3 their case. Thank you very much.

4 JUDGE WALLACE: Thank you, Mr. Templeton.
5 All right. Ms. Horne.

6 MS. HORNE: Good afternoon, your Honor.
7 Walmart, Inc., moves to bind in the Direct Testimony of
8 Lisa V. Perry, filed on July 26, 2024, which consists of
9 a cover page, a table of contents, and 23 pages of
10 questions and answers. Walmart also moves for the
11 admission into the record of four exhibits, Exhibit
12 WAL-1, a 17 page exhibit; Exhibit WAL-2, a one-page
13 exhibit; Exhibit WAL-3, a five-page exhibit; and Exhibit
14 WAL-4, a one-page exhibit. It is my understanding that
15 no one wishes to cross-examine Ms. Perry, and that there
16 is no objection to her testimony being bound in or to the
17 exhibits being admitted. Accordingly, Walmart requests
18 that the testimony be bound in and the exhibits be
19 admitted.

20 JUDGE WALLACE: Thank you, Ms. Horne. Is
21 there any objection to binding in the testimony of
22 Ms. Perry?

23 Hearing none, the testimony is bound in.

24 Is there any objection to the admission
25 of Exhibits WAL-1 through WAL-4?

1 Hearing none, those exhibits are
2 admitted.

3 (Testimony bound in.)

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STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the Application of)
DTE ELECTRIC COMPANY for authority)
to increase its rates, amend its rate)
schedules and rules governing the)
distribution and supply of electric)
energy, and for miscellaneous)
accounting authority.)

Case No. U-21534

DIRECT TESTIMONY AND EXHIBITS OF

LISA V. PERRY

ON BEHALF OF

WALMART INC.

JULY 26, 2024

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Exhibits

Exhibit WAL-1:	Witness Qualifications Statement
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Exhibit WAL-4:	Impact of DTE’s Proposed Increase in ROE vs. National Average ROE for Vertically Integrated Utilities (9.62%)

1 **I. Introduction**

2 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND OCCUPATION.**

3 A. My name is Lisa V. Perry. My business address is 2608 SE J Street, Bentonville,
4 Arkansas 72716-0550. I am employed by Walmart Inc. (“Walmart”) as Director, Utility
5 Partnerships - Regulatory.

6 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS CASE?**

7 A. I am testifying on behalf of Walmart.

8 **Q. PLEASE DESCRIBE YOUR EDUCATION AND EXPERIENCE.**

9 A. I received a J.D. in 1999 and a LL.M. in Taxation in 2000 from the University of Florida
10 Levin College of Law. From 2001 to 2019, I was in private practice, with an emphasis
11 in Energy Law from 2007 to 2019. My practice included representing large commercial
12 clients before the utility regulatory commissions in Colorado, Texas, New Mexico,
13 Arkansas, and Louisiana in matters ranging from general rate cases to renewable energy
14 programs. I joined the energy department at Walmart in September 2019 as Senior
15 Manager, Energy Services. My Witness Qualifications Statement is attached as Exhibit
16 WAL-1.

17 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE THE**
18 **MICHIGAN PUBLIC SERVICE COMMISSION (“COMMISSION”)?**

19 A. Yes, I submitted testimony in Case Nos. U-20697, U-20963, U-20836, U-21224, U-
20 21297, and U-21389.

1 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE OTHER**
2 **STATE REGULATORY COMMISSIONS?**

3 A. Yes, I have submitted testimony with state regulatory commissions in Arkansas,
4 Colorado, Connecticut, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky,
5 Louisiana, Maryland, North Carolina, New York, Ohio, Oklahoma, Oregon,
6 Pennsylvania, South Carolina, Texas, Virginia, Washington, and Wyoming. I have also
7 provided legal representation for customer stakeholders before the state regulatory
8 commissions in Colorado, Texas, Arkansas, Louisiana, and New Mexico in the cases
9 listed under “Commission Dockets” in Exhibit WAL-1.

10 **Q. ARE YOU SPONSORING EXHIBITS IN YOUR TESTIMONY?**

11 A. Yes. I am sponsoring the exhibits listed in the Table of Contents.

12 **Q. PLEASE BRIEFLY DESCRIBE WALMART'S OPERATIONS IN MICHIGAN.**

13 A. As shown on Walmart’s website, Walmart operates 117 retail units, two distribution
14 centers, one fulfillment center, and employs over 35,000 associates in Michigan. In
15 fiscal year ending 2024, Walmart purchased \$3.1 billion worth of goods and services
16 from Michigan-based suppliers, supporting nearly 40,000 supplier jobs.¹

¹ <https://corporate.walmart.com/about/location-facts/united-states/michigan>

1 **Q. PLEASE BRIEFLY DESCRIBE WALMART’S OPERATIONS WITHIN THE**
2 **SERVICE TERRITORY FOR DTE ELECTRIC COMPANY (“DTE” OR**
3 **“COMPANY”).**

4 A. Walmart has approximately 40 retail stores and related facilities in DTE’s service
5 territory. Primarily, these facilities are served on the Company’s Rate Schedule No. 11
6 – Primary Supply Rate (“D11”). About 71 percent of Walmart’s load is served by a
7 third-party competitive supplier and the remainder takes generation service from DTE.

8
9 **II. Purpose of Testimony and Summary of Recommendations**

10 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

11 A. The purpose of my testimony is to respond to portions of DTE’s Application filed on
12 March 28, 2024 (“Application”) in which it is seeking, *inter alia*, an increase in rates.
13 In particular, my testimony (i) addresses the Company’s proposed increase in its return
14 on equity (“ROE”), (ii) discusses the cost of service study (“COSS”), production cost
15 allocation methodology, and rate design for Rate Schedule D11 proposed by the
16 Company, (iii) responds to the Company’s proposal to extend and expand the scope of
17 the Distribution Investment Recovery Mechanism (“IRM”), and (iv) provides options
18 for offering rates to customers who are interested in installing public EV charging
19 stations.

1 **Q. IN SETTING THE REVENUE REQUIREMENT, ROE, ALLOCATION, AND**
2 **RATE DESIGN CHANGES FOR THE COMPANY, SHOULD THE**
3 **COMMISSION CONSIDER THE IMPACT OF THE PROPOSED RATE**
4 **INCREASE ON BUSINESS CUSTOMERS?**

5 A. Yes. Electricity is a significant operating cost for retailers such as Walmart. When
6 electric rates increase, the increased cost to retailers can put pressure on consumer
7 prices and other expenses required by a business to operate. The Commission should
8 thoroughly and carefully consider the impact on customers in examining the requested
9 revenue requirement and ROE, in addition to all other facets of this case, to ensure that
10 any increase in the Company's rates is the minimum amount necessary to provide safe,
11 adequate, and reliable service, while also providing DTE with the opportunity to
12 recover its reasonable and prudent costs and earn a reasonable return on its investment.

13 **Q. PLEASE SUMMARIZE WALMART'S RECOMMENDATIONS TO THE**
14 **COMMISSION.**

15 A. Walmart's recommendations to the Commission are as follows:

- 16 (1) The Commission should thoroughly and carefully consider the impact on
17 customers in examining the requested revenue requirement and ROE, in
18 addition to all other facets of this case, to ensure that any increase in the
19 Company's rates reflects the minimum amount necessary to compensate the
20 Company for adequate and reliable service, while also providing DTE an
21 opportunity to earn a reasonable return for its shareholders.

- 1 (2) The Commission should closely examine DTE's proposed revenue requirement
2 increase and the associated ROE, especially when viewed in light of:
- 3 (A) the impact of the resulting revenue requirement increase on customers;
- 4 (B) the reduced risk associated with Michigan's regulatory framework and
5 Commission precedent, including the (i) use of a projected test year
6 (which reduces the risk due to regulatory lag based on the inclusion of
7 the most current information in its rates when they will be in effect), (ii)
8 inclusion of CWIP in rate base, and (iii) the IRM currently approved for
9 2024 and 2025 and for which the Company is seeking an extension
10 through 2026 and 2027 in this case; and
- 11 (C) recent ROEs approved in Michigan and other jurisdictions nationally.
- 12 (3) For the purposes of this case, Walmart does not oppose the Company's
13 proposed 4CP 75/0/25 production cost allocation methodology.
- 14 (4) For purposes of this case, Walmart does not take a position on the other
15 components of the Company's proposed cost of service model. However, to the
16 extent that alternative cost of service models, including alternative production
17 cost allocation methodologies, or modifications to the Company's model are
18 proposed by other parties, Walmart reserves the right to address the alternatives.
- 19 (5) For the purposes of this case, Walmart does not oppose maintaining the current
20 rate design for Rate D11. However, to the extent that alternative rate designs or
21 modifications to the Company's rate design for D11 are proposed by other
22 parties, Walmart reserves the right to address the alternatives.

1 (6) If the Commission approves extending the IRM, it should also require the
2 Company to file a base rate case at the earliest possible date when the assets can
3 be included in the Company's test year. Additionally, the Commission should
4 deny recovery of any costs exceeding what was approved in the Company's last
5 rate case for IRM plan years 2024 and 2025, requiring the Company to recover
6 these additional costs through base rates instead.

7 (7) If the Commission extends the IRM beyond 2025, it should evaluate whether
8 increasing the scope to include ever-increasing costs through a rider is
9 necessary for ensuring reliability, or if such costs should be recovered through
10 base rates as historically done, to consider all costs, benefits, and risks
11 comprehensively.

12 (8) Walmart recommends that the Commission either remove the two-year
13 limitation from Rate Schedule D3 or require the Company to collaborate with
14 interested parties to develop a public EV charging-specific rate that is informed
15 by data from the alternative COSS presented in this case as well as future data,
16 and require the Company to seek approval of such rate in its next general rate
17 case.

18 **Q. DOES THE FACT THAT YOU MAY NOT ADDRESS AN ISSUE OR**
19 **POSITION ADVOCATED BY THE COMPANY INDICATE WALMART'S**
20 **SUPPORT?**

21 A. No. The fact that an issue is not addressed herein or in related filings should not be
22 construed as an endorsement of, agreement with, or consent to any filed position.

III. Revenue Requirement and ROE

Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY'S PROPOSED REVENUE REQUIREMENT INCREASE?

A. My understanding is that the Company proposes a revenue requirement increase of approximately \$456.4 million for the January 1, 2025, through December 31, 2025 projected test year.²

Q. WHAT IS THE COMPANY'S PROPOSED ROE IN THIS CASE?

A. DTE proposes an ROE of 10.50 percent, based on a range of 10.25 percent to 11.00 percent.³ Based on a capital structure of 50.0 percent equity, the proposed ROE results in an overall rate of return of 5.92 percent on an after-tax basis and a pre-tax rate of return equal to 7.37 percent.⁴

Q. HOW DOES THE PROPOSED ROE COMPARE TO THE COMPANY'S CURRENTLY APPROVED ROE?

A. The proposed ROE of 10.50 percent is 60 basis points higher than the ROE of 9.90 percent approved by the Commission on December 1, 2023.⁵

² See Application at p. 2, ¶ 4; *see also* Qualifications and Revised Direct Testimony of Neal T. Foley ("Foley Revised Direct"), p. 23, lines 8-10.

³ See Revised Direct Testimony of Dr. Bente Villadsen, p. 5, line 7 to p. 6, line 5.

⁴ See Application at p. 4, ¶ 14; *see also* Exhibit A-14, Schedule D-1, p. 1.

⁵ *In the matter of the application of DTE ELECTRIC COMPANY for authority to increase its rates, amend its rate schedules and rules governing the distribution and supply of electric energy, and for miscellaneous accounting authority*, Michigan Public Service Commission Case No. U-21297, Order issued December 1, 2023 ("2023 Final Order"), p. 186.

1 **Q. IS WALMART CONCERNED ABOUT THE REASONABLENESS OF THE**
2 **COMPANY’S PROPOSED ROE?**

3 A. Yes. Walmart believes that the Company’s proposed ROE of 10.50 percent is
4 excessive, especially in light of:

5 (1) the customer impact of the resulting revenue requirement increase as discussed
6 below;

7 (2) the reduced risk associated with Michigan’s regulatory framework and
8 Commission precedent, including the (i) use of a projected test year (which
9 reduces the risk due to regulatory lag based on the inclusion of the most current
10 information in its rates when they will be in effect), (ii) inclusion of CWIP in
11 rate base, (iii) and the IRM currently approved for 2024 and 2025 and for which
12 the Company is seeking an extension through 2026 and 2027 in this case; and

13 (3) recent ROEs approved in Michigan and other jurisdictions nationwide.

14
15 (A) *Customer Impact*

16 **Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY’S CURRENTLY**
17 **APPROVED ROE?**

18 A. As stated above, my understanding is the Company’s currently approved ROE is 9.90
19 percent as authorized by the Commission in Case No. U-21297.⁶

⁶ See 2023 Final Order, p. 186.

1 **Q. HAVE YOU CALCULATED AN ESTIMATE OF THE IMPACT OF THE**
2 **RETURN ON RATE BASE FROM THE COMPANY’S PROPOSED**
3 **INCREASE IN ROE FROM 9.90 PERCENT TO 10.50 PERCENT?**

4 A. Yes. Using the Company’s proposed rate base, cost of debt, and capital structure, the
5 impact of the proposed changes in authorized ROE alone is approximately \$70.4
6 million, or 15.4 percent of the proposed revenue deficiency.⁷

7
8 **(B) Regulatory Framework**

9 **Q. HAS THE COMMISSION RECOGNIZED THE EFFECT OF MICHIGAN’S**
10 **REGULATORY FRAMEWORK ON UTILITY RISK?**

11 A. Yes. In the Order in Case No. U-16472, the Commission stated:

12 Act 286 (1) allows Michigan utilities to use projected test year revenues,
13 expenses, and sales volumes in support of any requested rate increases, (2)
14 provides for the possibility of self-implementation of all or part of a
15 requested rate change within 180 days following submission of an
16 application, (3) requires that the Commission issue a final order concerning
17 the application within 365 days from its filing, lest the request be
18 automatically implemented, and (4) restricts the amount of retail choice to
19 10% of a utility’s total sales. These changes in Michigan’s regulatory
20 framework, which tend to lean heavily in favor of the utilities and their
21 investors by significantly reducing the risk borne by such companies in the
22 past, necessitate taking a conservative approach with regard to the specific
23 ROE authorized in rate cases like this. *See*, October 20, 2011, order in Case
24 Nos. U-16472 and U-16489, page 39 (citing Proposal for Decision, Case
25 Nos. U-16742 and U-16489, August 12, 2011, page 49).

⁷ Exhibit WAL-2.

1 **Q. SHOULD THE COMMISSION CONTINUE TO RECOGNIZE THE EFFECT**
2 **OF MICHIGAN’S REGULATORY FRAMEWORK ON UTILITY RISK?**

3 A. Yes. The Commission should continue to recognize the effect of Michigan’s regulatory
4 framework on utility risk. In addition to the characteristics outlined in its Order in Case
5 No. U-16472, the Commission should also consider the risk-reducing impact of
6 including CWIP in the rate base, as well as the IRM in its current form and the proposed
7 extension and expansion of the IRM, if approved, when setting ROE.

8
9 ***(C) Recent ROEs Approved by the Commission***

10 **Q. IS THE COMPANY’S PROPOSED ROE SIGNIFICANTLY HIGHER THAN**
11 **THE ROEs APPROVED BY THIS COMMISSION FROM 2021 TO PRESENT?**

12 A. Yes. Since 2021, this Commission has issued orders with stated ROEs in seven dockets,
13 with the most recent ROE approved earlier this month. The average of these approved
14 ROEs is 9.90 percent.⁸

15 **Q. IN WHICH OTHER DOCKETS DID THE COMMISSION ISSUE ORDERS**
16 **WITH STATED ROES?**

17 A. The Commission issued orders with stated ROEs in the following dockets:
18

- 19 • Case No. U-20963, Consumers Energy Co. general rate case that completed in
20 2021, in which the Commission approved an ROE of 9.90 percent.
- 20 • Case No. U-20836, DTE’s general rate case that completed in 2022, in which

⁸ Exhibit WAL-3.

1 the Commission approved an ROE of 9.90 percent.

- 2 • Case No. U-21224, Consumers Energy Co. general rate case that completed in
- 3 2023, in which the Commission approved an ROE of 9.90 percent.
- 4 • Case No. U-21286, Upper Peninsula Power Co. general rate case that completed
- 5 in 2023, in which the Commission approved an ROE of 9.90 percent.
- 6 • Case No. U-21297, DTE's last general rate case that completed in 2023, in
- 7 which the Commission approved an ROE of 9.90 percent.
- 8 • Case No. U-21389, Consumers Energy Co. general rate case that completed in
- 9 2024, in which the Commission approved an ROE of 9.90 percent.
- 10 • Case No. U-21461, Indiana Michigan Power Co. general rate case that
- 11 completed in 2024, in which the Commission approved an ROE of 9.86 percent.

12 As such, the Company's proposed 10.50 percent ROE is counter to recent Commission
13 actions regarding ROE.

14
15 **(D) National Utility Industry ROE Trends**

16 **Q. IS THE COMPANY'S PROPOSED ROE SIGNIFICANTLY HIGHER THAN**
17 **THE ROEs APPROVED BY OTHER UTILITY REGULATORY**
18 **COMMISSIONS SINCE 2021?**

19 **A.** Yes. According to data from S&P Global Market Intelligence ("S&P Global"), a
20 financial news and reporting company, the average of the 123 reported electric utility
21 rate case ROEs authorized by commissions to investor-owned utilities in 2021, 2022,

2023, and so far in 2024, is 9.51 percent.⁹ The range of reported authorized ROEs over this period is 7.36 percent to 11.45 percent, and the median authorized ROE is 9.50 percent.¹⁰ The average and median values (9.51 and 9.50 percent, respectively) are significantly below the Company's proposed ROE of 10.50 percent. As such, the Company's requested 10.50 percent ROE is counter to broader electric industry trends.

Q. SEVERAL OF THE REPORTED AUTHORIZED ROEs ARE FOR DISTRIBUTION-ONLY UTILITIES OR FOR ONLY A UTILITY'S DISTRIBUTION SERVICE RATES. WHAT IS THE AVERAGE AUTHORIZED ROE IN THE REPORTED GROUP FOR VERTICALLY INTEGRATED UTILITIES?

A. In the group reported by S&P Global, the average authorized ROE for vertically integrated utilities from 2021 through present is 9.62 percent.¹¹ The average ROE authorized for vertically integrated utilities in 2021 was 9.54 percent; in 2022, it was 9.60 percent; in 2023, it was 9.71 percent, and so far in 2024 the average ROE is 9.75 percent.¹² By comparison to all nationwide metrics, the Company's proposed 10.50 percent ROE is counter to broader electric industry trends and, in fact, as shown in Figure 1, if approved, would be tied for the third highest approved ROE for any vertically integrated utility since 2021.

⁹ See Exhibit WAL-3.

¹⁰ See *id.*

¹¹ See *id.*

¹² See *id.*

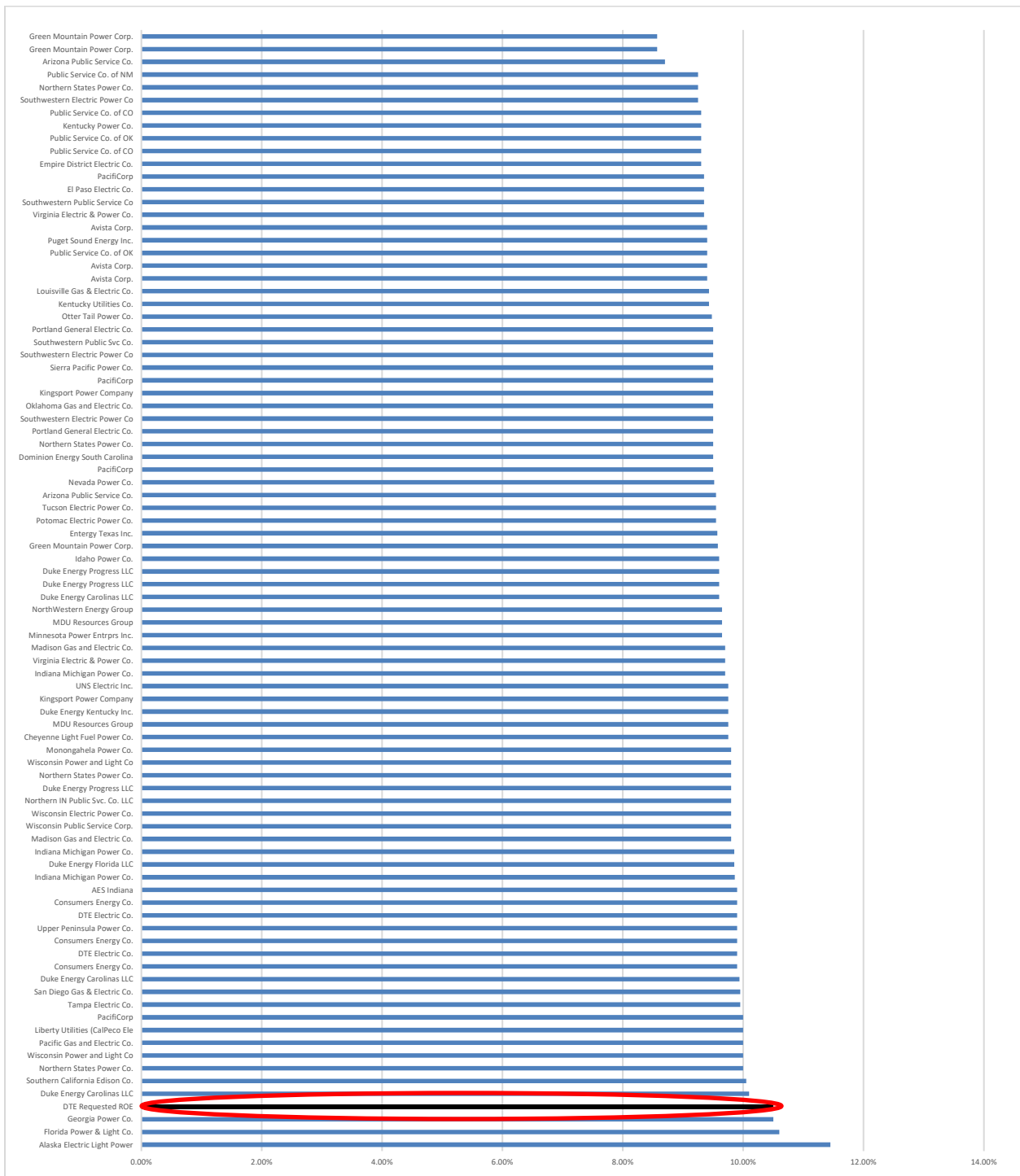


Figure 1. DTE Proposed ROE Versus Authorized ROEs for Vertically Integrated Utilities, 2021 to Present. Source: Exhibit WAL-3.

1 **Q. IS WALMART RECOMMENDING THAT THE COMMISSION BE BOUND**
2 **BY ROEs AUTHORIZED BY OTHER STATE REGULATORY AGENCIES?**

3 A. No. Decisions of other state regulatory commissions are not binding on the
4 Commission. Additionally, each commission considers the specific circumstances in
5 each case in its determination of the proper ROE. Walmart is providing this information
6 to illustrate a national customer perspective on industry trends in authorized ROE,
7 which has a demonstrable effect on revenue requirement and the burden on customers.

8 **Q. WHAT IS THE IMPACT OF THE RETURN ON RATE BASE IF THE**
9 **COMMISSION WERE TO APPROVE AN ROE EQUIVALENT TO 9.62**
10 **PERCENT, THE AVERAGE ROE AWARDED TO VERTICALLY**
11 **INTEGRATED UTILITIES SINCE 2021?**

12 A. If the Commission were to approve an ROE of 9.62 percent versus the Company's
13 proposal of 10.50 percent, it would reduce the revenue requirement sought by the
14 Company by approximately \$103.2 million, or 22.6 percent.¹³

15
16 **(E) Conclusion**

17 **Q. WHAT IS YOUR RECOMMENDATION TO THE COMMISSION IN**
18 **REGARD TO THE COMPANY'S PROPOSED ROE?**

19 A. The Commission should closely examine DTE's proposed revenue requirement
20 increase and the associated ROE, especially when viewed in light of:

¹³ See Exhibit WAL-4.

- 1 (1) the impact of the resulting revenue requirement increase on customers;
- 2 (2) the reduced risk associated with Michigan's regulatory framework and
- 3 Commission precedent, including the (i) use of a projected test year (which
- 4 reduces the risk due to regulatory lag based on the inclusion of the most current
- 5 information in its rates when they will be in effect), (ii) inclusion of CWIP in
- 6 rate base, and (iii) the IRM currently approved for 2024 and 2025 and for which
- 7 the Company is seeking an extension through 2026 and 2027 in this case; and
- 8 (3) recent ROEs approved in Michigan and other jurisdictions nationally.
- 9

10 **IV. Cost of Service and Rate Design**

11 ***(A) Cost of Service – Production Cost Allocation Methodology***

12 **Q. GENERALLY, WHAT IS WALMART'S POSITION ON SETTING RATES**

13 **BASED ON THE UTILITY'S COST OF SERVICE?**

14 A. Walmart advocates that rates be set based on the utility's cost of service for each rate

15 class. This produces equitable rates that reflect cost causation, send proper price

16 signals, and minimize price distortions.

1 **Q. WHAT IS YOUR UNDERSTANDING OF THE COMPANY’S PROPOSED**
2 **PRODUCTION COST ALLOCATION METHODOLOGY?**

3 A. My understanding is that the Company proposes to allocate 75 percent of production plant
4 cost using a four coincident peak (“4CP”) allocator, zero percent of the production capacity
5 cost on the MISO on-peak period energy consumption, and the remaining 25 percent of the
6 production capacity cost using a total energy consumption allocator (“4CP 75/0/25”),
7 which is the method approved in the Company’s last general rate case, Case No. U-
8 21297.¹⁴

9 **Q. DOES WALMART OPPOSE THE PROPOSED PRODUCTION COST**
10 **ALLOCATION METHODOLOGY PRESENTED BY THE COMPANY?**

11 A. For the purposes of this case, Walmart is not opposing the Company’s proposed 4CP
12 75/0/25 production cost allocation methodology.

13 **Q. DOES WALMART TAKE A POSITION ON THE OTHER PORTIONS OF THE**
14 **COST OF SERVICE MODEL PRESENTED BY THE COMPANY?**

15 A. No. For purposes of this case, Walmart does not take a position on the other components
16 of the Company’s proposed cost of service model. However, to the extent that alternative
17 cost of service models, including alternative production cost allocation methodologies, or
18 modifications to the Company’s model are proposed by other parties, Walmart reserves the
19 right to address the alternatives.

¹⁴ See Qualifications and Direct Testimony of Habeeb J. Maroun, p. 9, lines 21-24.

1 **(B) Rate Design for Rate D11**

2 **Q. IS THE COMPANY PROPOSING ANY RATE DESIGN CHANGES TO RATE**
3 **D11?**

4 A. No; it is my understanding that the Company is not proposing any structural changes
5 to the design of its current rates for the Company's Rate D11 and will continue to
6 allocate the revenue requirement to the relevant classes based on its cost of service
7 study to ensure rates are cost based.¹⁵

8 **Q. WHAT IS WALMART'S RECOMMENDATION TO THE COMMISSION ON**
9 **THE COMPANY'S CURRENT RATE DESIGN FOR RATE D11?**

10 A. For the purposes of this case, Walmart does not oppose maintaining the current rate
11 design for Rate D11. However, to the extent that alternative rate designs or
12 modifications to the Company's rate design for D11 are proposed by other parties,
13 Walmart reserves the right to address the alternatives.

14
15 **V. Extension and Expansion of the Distribution IRM**

16 **Q. PLEASE DESCRIBE YOUR UNDERSTANDING OF THE IRM AS**
17 **CURRENTLY APPROVED?**

18 A. My understanding is that the Company originally requested approval of the IRM in its
19 last rate case as a mechanism to recover costs related to five programs investing in the

¹⁵ See Qualifications and Direct Testimony of Aaron Willis ("Willis Direct"), p. 37, line 21 to p. 38, line 8.

1 Company's distribution system.¹⁶ These programs include (i) circuit conversions, (ii)
2 sub-transmission redesign and rebuild, (iii) breaker replacement, (iv) underground
3 residential distribution replacement, and (v) 4.8 kV circuit automation over three
4 planning years: 2024, 2025, and 2026.¹⁷ While the Commission recognized the value
5 in the Company's proposed IRM, it ultimately approved the mechanism with certain
6 limitations and restricting it to the first two plan years: 2024 and 2025.¹⁸

7 **Q. IS THE COMPANY PROPOSING TO EXTEND THE IRM?**

8 A. Yes, the Company is seeking approval to extend the IRM to cover two additional plan
9 years – 2026 and 2027.¹⁹ The proposed investment levels for each of these years is
10 \$530.0 million and \$720.0 million, respectively.²⁰

11 **Q. IS THE COMPANY PROPOSING TO EXPAND THE SCOPE OF THE IRM?**

12 A. Yes, it is. The Company is requesting that the Commission approve the recovery of
13 additional costs not currently authorized in the IRM, including:

14 (1) An alternative to the currently approved 2025 plan year that would increase the
15 capital investment for that year by the following: (i) distribution automation -
16 \$125.6 million; (ii) PTMM - \$121.0 million; (iii) 4.8 kV hardening - \$125.0
17 million; and (iv) frequent outage program (CEMI) - \$62.5 million;²¹

¹⁶ See Foley Revised Direct, p. 48, line 23 to p. 49, line 13.

¹⁷ See *id.*

¹⁸ See 2023 Final Order, p. 289.

¹⁹ See Foley Revised Direct, p. 52, lines 2-3.

²⁰ See *id.* at 53, Table 1: Proposed IRM Investment Levels (\$M).

²¹ See *id.* at 61, line 7 to p. 62, line 11.

- 1 (2) 2023 costs associated with the Breaker Replacement Program and URD
2 Replacement Program, which are currently approved for IRM recovery, but not
3 for 2023 costs;²²
- 4 (3) An additional capital program, the Pole and Pole Top Maintenance &
5 Modernization (PTMM) Program, which would recover \$150 million in 2026
6 and \$200 million in 2027;²³
- 7 (4) Expanding the scope of the currently approved “4.8 kV Circuit Automation” to
8 include broader “Distribution Automation;”²⁴ and
- 9 (5) As part of Distribution Automation, an additional \$21.2 million and \$125.6
10 million for the currently approved 2024 and 2025 IRM plan years, respectively,
11 which the Company describes as incremental investment supporting wholly
12 different work.²⁵

13 **Q. WHAT JUSTIFICATION DOES THE COMPANY PROVIDE FOR**
14 **REQUESTING AN EXTENSION AND EXPANSION OF THE CURRENTLY**
15 **APPROVED IRM?**

- 16 A. With regard to the extension, the Company claims that the additional two years is
17 needed to ensure the “continued and efficient operation” of the IRM until two other
18 cases, Case No. U-21400 (addressing performance based ratemaking) and Case No. U-

²² See Qualifications and Direct Testimony of Morgan Elliott Andahazy (“Andahazy Direct”), p. 5, lines 7-20.

²³ See *id.* at 6, lines 12-16.

²⁴ See Qualifications and Direct Testimony of Shannen M. Hartwick, p. 8, lines 21-23.

²⁵ See *id.* at 8, lines 4-9.

1 21305 (addressing a distribution system audit) have concluded.²⁶ The Company seems
2 to anticipate that future iterations of the IRM may incorporate the outcomes of these
3 cases.²⁷

4 **Q. HOW DOES THE COMPANY JUSTIFY EXPANSION OF THE IRM'S SCOPE?**

5 A. According to Company witness Andahazy, the Company considered three screening
6 criteria for programs added to the IRM: (i) critical to customer safety, reliability, and/or
7 resiliency, (ii) sufficient size and duration, and (iii) well-understood scope. Based upon
8 these criteria, the company justifies including the additional capital investments and
9 programs discussed above.²⁸

10 **Q. WHAT ARE WALMART'S CONCERNS WITH THE COMPANY'S**
11 **REQUESTS WITH REGARD TO THE IRM IN THIS CASE?**

12 A. As a retailer serving communities with essential goods for everyday living and
13 restoration efforts following major weather events, Walmart understands the
14 importance of resiliency and reliability. Walmart appreciates the Company's
15 investments in its distribution system to support these efforts. However, such
16 investments are traditionally recovered through base rates, allowing all costs, benefits,
17 and risks—including those related to capital investments in the distribution system and
18 those connected to the Company's overall business—to be systematically considered.
19 While Walmart acknowledges that the Commission, as stated in its 2023 Final Order,

²⁶ See Foley Revised Direct, p. 54, lines 20-23.

²⁷ See *id.* at 55, lines 6-11.

²⁸ See Andahazy Direct, p. 6, lines 20-25.

1 found some value in the IRM. However, based on its experience, Walmart is concerned
2 that these types of recovery mechanisms can expand beyond their original intent and
3 usefulness through a utility's efforts to continuously extend and broaden the scope of
4 such mechanisms, as is the case here.

5 **Q. WHAT IS WALMART'S RECOMMENDATION TO THE COMMISSION**
6 **WITH REGARD TO THE IRM?**

7 A. If the Commission approves extending the IRM, it should also require the Company to
8 file a base rate case at the earliest possible date when the assets can be included in the
9 Company's test year. Additionally, the Commission should deny recovery of any costs
10 exceeding what was approved in the Company's last rate case for IRM plan years 2024
11 and 2025, requiring the Company to recover these additional costs through base rates
12 instead.

13 If the Commission extends the IRM beyond 2025, it should evaluate whether
14 increasing the scope to include ever-increasing costs through a rider is necessary for
15 ensuring reliability, or if such costs should be recovered through base rates as
16 historically done, to consider all costs, benefits, and risks comprehensively.

17
18 **VI. EV Charging Rates**

19 **Q. DOES THE COMPANY OFFER AN EV CHARGING RATE FOR THIRD-**
20 **PARTY OWNED PUBLIC DIRECT CURRENT FAST CHARGERS ("DCFC")?**

21 A. Essentially, yes. As part of the Company's last rate case, the Commission authorized
22 customers under Rate Schedules D4, D6.2, D8, D11, and D12 to apply Rate Schedule

1 D3, which is an energy-only rate, for newly installed separately metered EV charging
2 stations for two years.²⁹ Additionally, the Commission required the Company to
3 conduct an alternative COSS to present in this case, incorporating DCFC as a separate
4 class, and to design a rate applicable to this class.³⁰

5 **Q. DID THE COMPANY CONDUCT THIS ALTERNATIVE COSS FOR**
6 **CONSIDERATION IN THIS CASE?**

7 A. Yes, it did. My understanding is that, based on the results of this alternative COSS, the
8 Company created a secondary voltage EV fast charger rate with time-of-use power
9 supply pricing that varies by time period and season.³¹

10 **Q. DOES THE COMPANY RECOMMEND APPROVAL OF THIS EV FAST**
11 **CHARGER RATE FOR THIRD PARTY OWNED DCFCs?**

12 A. No, it does not. Due to the small sample size of 21 DCFCs and the exclusion of some
13 chargers in the Company's service territory, the Company is proposing the EV fast
14 charger rate as an initial step for further discussions on developing an EV-specific
15 rate.³²

16 **Q. WHAT IS WALMART'S POSITION ON THE ALTERNATIVE COSS,**
17 **RESULTING TARIFF, AND CURRENT RATE SCHEDULE D3?**

18 A. Consistent with its position in the Company's prior rate case, Walmart supports
19 allowing customers under Rate Schedules D4, D6.2, D8, D11, and D12 to apply Rate

²⁹ See 2023 Final Order, p. 341 (limiting this rate for existing stations until June 1, 2026).

³⁰ See *id.* at 342.

³¹ See Willis Direct, p. 34, lines 17-18.

³² See Willis Direct, p. 36, lines 14-17.

1 Schedule D3 to their separately metered DCFCs. Walmart also understands the
2 Commission's requirement for the Company to provide an alternative COSS to better
3 assess the impact of DCFCs on the Company's system. Walmart acknowledges that the
4 current data used in the alternative COSS presented in this case is limited and may be
5 more appropriate for future discussions rather than supporting a separate EV charging-
6 specific tariff at this time.

7 However, Walmart is concerned that limiting the application of Rate Schedule
8 D3 to only two years, without a replacement EV charging rate, could deter companies
9 from investing in public EV chargers within the Company's service territory due to the
10 economic uncertainty created by rate instability.

11 **Q. WHAT IS WALMART'S RECOMMENDATION TO THE COMMISSION ON**
12 **THIS ISSUE?**

13 A. Walmart recommends that the Commission either remove the two-year limitation from
14 Rate Schedule D3 or require the Company to collaborate with interested parties to
15 develop a public EV charging-specific rate that is informed by data from the alternative
16 COSS presented in this case as well as future data, and require the Company to seek
17 approval of such rate in its next general rate case.

18 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

19 A. Yes.

1 MS. HORNE: Thank you, your Honor.

2 Walmart rests its case.

3 JUDGE WALLACE: Thank you. All right.

4 Ms. Flower.

5 MS. FLOWER: Good afternoon, your Honor.

6 Olivia Flower representing International Transmission
7 Company. I move to bind in the Direct Testimony of Kwafo
8 L. Adarkwa, which consists of six pages of questions and
9 answers. No accompanying exhibits and no confidential
10 material.

11 JUDGE WALLACE: Is there any objection to
12 in the testimony of Mr. Adarkwa?

13 Hearing none, that testimony is bound in.

14 (Testimony bound in.)

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**STATE OF MICHIGAN
BEFORE THE
MICHIGAN PUBLIC SERVICE COMMISSION**

In the matter of the Application of DTE)
ELECTRIC COMPANY for authority to)
increase its rates, amend its rate schedules) Case No. U-21534
and rules governing the distribution and)
supply of electric energy, and for)
miscellaneous accounting authority.

DIRECT TESTIMONY OF KWAFO L. ADARKWA

1 **Q. Please state your name and business address.**

2 A. My name is Kwafo Adarkwa. My business address is 27175 Energy Way, Novi, Michigan
3 48377.

4 **Q. By whom are you employed and in what capacity?**

5 A. I am employed by ITC Holdings Corp. ("ITC") and serve as the Director of Public Affairs
6 for the Michigan Business Unit, which is comprised of ITC Transmission Company d/b/a
7 *ITCTransmission* ("ITCT") and Michigan Electric Transmission Company ("METC").

8 **Q. Please briefly describe your educational background.**

9 A. I hold a Bachelor of Science degree in Electrical Engineering from Michigan State
10 University that was granted in 2003 and a Master's Degree in Business Administration
11 from The Eli Broad Graduate School of Management of Michigan State University that
12 was granted in 2013.

13 **Q. Please describe your professional background.**

14 A. Prior to joining ITC, I was a Public Utilities Engineer with the Michigan Public Service
15 Commission ("MPSC" or the "Commission") from October 2004 through August 2008. I

1 began my employment with ITC in August of 2008 as a Regulatory Specialist responsible
2 for liaising with the MPSC and collecting and analyzing data. In April 2011, I was
3 promoted to Senior Regulatory Analyst responsible for shaping transmission policy
4 positions, analyzing rate information, and liaising with the MPSC. In May 2015, I was
5 promoted to Manager of Regulatory Strategy for the company. In April 2021, I was
6 promoted to Director of Public Affairs for ITC, my current role.

7 **Q. What are your duties and responsibilities in your current position?**

8 A. As the Director of Public Affairs, my responsibilities include overseeing the state
9 regulatory and legislative affairs of ITC for the ITC Michigan business unit. This includes
10 interacting with federal- and state-level regulators and shaping ITC public policy. I am
11 also the Leader of the Company's Electrification Efforts.

12 **Q. Have you previously testified before the MPSC?**

13 A. Yes. I have previously provided testimony before the MPSC, including in DTE Electric
14 Company's last rate cases in Case Nos. U-20836 and U-21297. I have also testified in
15 Consumers Energy's rate cases in Case Nos. U-21224 and U-21389.

16 **Q. What is the purpose of your testimony?**

17 A. I am testifying on behalf of ITC in DTE Electric Company's ("DTE" or the "Company") rate
18 case proceeding. My testimony is in support of DTE's proposal to extend the Charging
19 Hubs pilot program for electric vehicle charging. My testimony will also discuss ITC's
20 concerns with new customer load growth, particularly ensuring that Michigan's electric
21 infrastructure can support this growth.

22 **Q. Do you sponsor any exhibits with your direct testimony?**

23 A. No, I do not.

1 **Q. What is ITC's role in this proceeding?**

2 A. ITC is an independent, standalone transmission company, and the owner of the
3 transmission system that serves DTE. ITC's transmission system functions as
4 backbone infrastructure in DTE's service territory and will ensure reliability while
5 managing new demands on the system associated with electric vehicle ("EV") charging,
6 electrification and load growth. Collaboration among DTE, ITC, the Commission and
7 third-party electric vehicle supply equipment ("EVSE") charging providers will be
8 essential to ensuring that charging infrastructure is built out in a manner that best
9 utilizes available capacity on the grid, ensures reliable service, minimizes the cost of
10 infrastructure and provides equitable access to EV charging to all communities in
11 DTE's service territory. Additionally, transmission planning, including close
12 coordination between transmission providers and distribution utilities, is essential to
13 supporting the investment in electric infrastructure that is needed to support large load
14 growth projects, such as data centers.

15 **Q. Why does ITC support DTE's current proposal to extend the Charging Hubs pilot?**

16 A. ITC believes DTE's proposal to extend the Charging Hubs pilot is a reasonable
17 approach to spur additional fleet electrification in Michigan. The state needs to make
18 progress on EV infrastructure development with the anticipated number of EVs coming to
19 market in Michigan.¹ A recent study showed that EV sales in the United States are
20 expected to increase by 85% through 2040.² If EV adoption follows anticipated trends,

¹ See, e.g., DTE Electric, *2022 DTE Electric 2022 Integrated Resource Plan Summary*, at 25 ("[DTE] expect[s] light-duty EV stock will grow nearly 20% annually on average from 2023 through 2042 in [DTE's] service territory.")

² Goldman Sachs, *Electric Vehicles are Forecast to be Half of Global Car Sales by 2035* (February 10, 2023), available at <https://www.goldmansachs.com/intelligence/pages/electric-vehicles-are-forecast-to-be-half-of-global-car-sales-by-2035.html>.

DTE should consider planning for additional Charging Hubs in its next rate case to ensure electrification of medium-duty (“MD”) and heavy-duty (“HD”) vehicle fleets is as seamless and expedient as possible.³

Q. What does ITC request regarding DTE’s EV programs in this case?

A. The Commission should support and encourage DTE to work with ITC to ensure that system improvements developed to support EV load growth are optimized with transmission planning.

Q. Can you explain the need for regional transmission expansion and how it will support EV charging and new demands on the grid?

A. Through the MI Healthy Climate Plan⁴, Governor Whitmer has established a goal to build the infrastructure needed to support two million EVs on Michigan roads by 2030. This 2030 timeframe converges with current state and utility goals to generate roughly sixty percent of the state’s electricity from renewable resources and phase out the state’s remaining coal-fired power plants. Taken together, these goals require significant expansion of the transmission network in Michigan and throughout the MISO region by the end of this decade.

Fortunately, MISO’s Long-Range Transmission Planning (“LRTP”) initiative is designed to meet this need. Planning for Tranche 2, a second tranche of backbone projects, is currently underway. Tranche 2 will be needed to maintain reliability in the 10-

³ The deployment of additional infrastructure by third-party EVSE providers should be tracked throughout this period and could alter this outlook.

⁴ Michigan Department of Environmental, Great Lakes and Energy, *MI Healthy Climate Plan*, at 5 (April 2022), available at <https://www.michigan.gov/egle/-/media/Project/Websites/egle/%20Documents/Offices/OCE/MI-Healthy-Climate-Plan.pdf?rev=d13f4adc2b1d45909bd708cafccb%20ffa&hash=99437BF2709B9B3471D16FC1EC692588>.

1 20 year-out timeframe. In fact, conventional resource retirements and the transition to
2 renewable generation sources is occurring at a more rapid pace throughout the region
3 than what was anticipated at the outset of the LRTP initiative. Renewables are projected
4 to reach 30% system-wide penetration—an inflection point for operational complexity⁵—
5 10 years *sooner* than what was forecast in the first series of MISO futures scenarios.⁶ As
6 renewable resource integration continues to accelerate, regional transmission expansion
7 is needed to both interconnect new resources coming online and to efficiently move energy
8 across the region.

9 Regional transmission initiatives, like LRTP Tranche 2, will support the Governor's
10 goals for widespread adoption of EVs and electrification in a renewable energy-based
11 future by providing essential reliability services beyond what local resources are able to
12 provide. Transmission infrastructure, by design, is dynamic, bi-directional, and can react
13 to a system need nearly instantaneously offering system operators much needed flexibility
14 to operate a decentralized generation fleet. In a future that depends on intermittent
15 renewable energy sources like wind and solar, it is critical that we have sufficient access
16 to geographically diverse generator resources to manage reliability risks associated with
17 low local resource availability and high demand. These conditions can occur during
18 extreme weather events—like those during Winter Storm Uri⁷—or during more mundane

⁵ Midcontinent Independent System Operator, *MISO's Renewable Integration Impact Assessment*, at. 5, (February 2021), available at <https://cdn.misoenergy.org/RIIA%20Executive%20Summary520053.pdf>.

⁶ Midcontinent Independent System Operator, *Future 2A Expansion & Preliminary Siting: LRTP Workshop*, at 7 (March 10, 2023), available at <https://cdn.misoenergy.org/20230310%20LRTP%20Workshop%20Item%20002%20MISO%20Future%202A%20Expansion%20and%20Preliminary%20Siting628178.pdf>.

⁷ Federal Energy Regulatory Commission, *FERC - NERC - Regional Entity Staff: The February 2021 Cold Weather Outages in Texas and the South Central United States*

1 conditions, in particular, cold winter mornings and hot summer evenings. Regional
2 transmission expansion is the only way to manage changing generation and weather risks
3 while ensuring reliability throughout the resource transition.

4 Maintaining system reliability and affordable electric service through access to a
5 broad network of generation resources is also critical for EV adoption itself to continue and
6 accelerate. Vehicle and fleet owners will be reluctant to electrify if there is uncertainty with
7 respect to cost or reliability. Thus, widespread EV adoption in the future will rely on the
8 infrastructure we plan today. ITC's proactive transmission planning process will identify
9 no-regrets projects that will serve as the backbone for electric infrastructure that,
10 regardless of where and how large electrified loads or renewable energy resources locate,
11 will deliver the energy from where it is produced to where it is consumed in a reliable and
12 cost effective manner.

13 **Q. What does ITC request with regard to DTE's load growth and electrification**
14 **efforts?**

15 A. There is a pressing need in Michigan for improved regional transmission to ensure
16 reliability but also access to low-cost energy resources. The Commission and DTE
17 should continue to support and participate actively in Tranche 2 of MISO's LRTP
18 planning process.

19 **Q. Does that conclude your testimony?**

20 A. Yes.

(November 16, 2021), available at <https://www.ferc.gov/media/february-2021-cold-weather-outages-texas-and-south-central-united-states-ferc-nerc-and>.

1 MR. OLIVA: Next, I move to bind in the
2 Direct Testimony of Pushkar Chindhade, which consists of
3 five pages of questions and answers, as well as his
4 rebuttal testimony, which consists of four pages of
5 questions and answers. No exhibits and no confidential
6 material.

7 JUDGE WALLACE: I'm sorry, can you repeat
8 the witness's name, please.

9 MR. OLIVA: Pushkar Chindhade.

10 JUDGE WALLACE: One more time.

11 MR. OLIVA: Sorry. Pushkar Chindhade.

12 JUDGE WALLACE: Chindkade [ph].

13 MR. OLIVA: Hade.

14 JUDGE WALLACE: Huh. Hold on one second.

15 MR. OLIVA: I can also just drop it in
16 the chat.

17 JUDGE WALLACE: O.K. Is there any
18 objection to binding in the direct and rebuttal testimony
19 of Mr. Chindhade?

20 Hearing none, the testimony is bound in.

21 (Testimony bound in.)

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**STATE OF MICHIGAN
BEFORE THE
MICHIGAN PUBLIC SERVICE COMMISSION**

In the matter of the Application of DTE)
ELECTRIC COMPANY for authority to)
increase its rates, amend its rate schedules)
and rules governing the distribution and)
supply of electric energy, and for)
miscellaneous accounting authority.

Case No. U-21534

DIRECT TESTIMONY OF PUSHKAR CHINDHADE

1 **Q. Please state your name and business address.**

2 A. My name is Pushkar Chindhade. My business address is 27175 Energy Way, Novi,
3 Michigan 48377.

4 **Q. By whom are you employed and in what capacity?**

5 A. I am the Principal Operations Engineer for ITC Holdings Corp. ("ITC").

6 **Q. Please briefly describe your educational background.**

7 A. I hold a Bachelor of Science degree in Electrical Engineering from M.S. University of
8 Baroda (India) and a master's degree in Electrical Engineering from University of
9 Tennessee at Chattanooga.

10 **Q. Please describe your professional background.**

11 A. Prior to joining ITC, I worked with Honeywell Technology Services for a Big Dig project in
12 Boston as an Electrical Test Engineer, from June 2002 through January 2006. I began
13 my employment at ITC in 2006 as a TMS Supervisory Control and Data Acquisition
14 ("SCADA") Engineer in TMS support team and focused on Energy Management System

1 (“EMS”) implementation. I then moved to Operations Engineering Department supported
2 Operations Training Simulator, Real Time Operations support, Network Modeling and
3 became primary subject matter expert for the North American Electric Reliability
4 Corporation (“NERC”) EOP-005, which governs system restoration plans (“SRP”). am
5 currently working as Principal Operations Planning Engineer.

6 **Q. What are your duties and responsibilities in your current position?**

7 A. As Principal Operations Planning Engineer, I support Real Time Operations Planning,
8 Conduct Forward and Next Day Study in ITC’s Michigan footprint and maintain ITC’s SRP.

9 **Q. Have you previously testified before the MPSC?**

10 A. No, I have not previously testified before the MPSC.

11 **Q. What is the purpose of your testimony?**

12 A. I am testifying on behalf of ITC in DTE Electric Company’s (“DTE” or the “Company”) rate
13 case proceeding. My testimony is in support of DTE’s proposal to prioritize blackstart
14 resource investment.

15 **Q. Do you sponsor any exhibits with your direct testimony?**

16 A. No, I do not.

1 **Q. What is ITC's role in this proceeding?**

2 A. ITC is an independent, standalone transmission company, and the owner of the Bulk
3 Electric System ("BES") infrastructure that transmits electric energy from electric
4 generators onto the subtransmission and distribution systems owned by DTE. In the
5 event of a major grid event, DTE has invested in blackstart resources to start the grid
6 back up on its own power. As such, support of DTE's blackstart resources has a direct
7 impact on the reliability of the transmission system owned by ITCTransmission
8 ("ITCT").

9 **Q. Why are blackstart resources important to the transmission system and the wider**
10 **electric grid?**

11 A. Each Transmission Operator ("TOP") is required to have an SRP under NERC standards.
12 Blackstart resources are a key component to a TOP's SRP. NERC requires TOPs (such
13 as ITCT) to have an SRP allowing for restoration of that TOP's System following a
14 disturbance in which one or more areas of the BES shuts down. NERC's current
15 requirement is found in EOP-005-3, which generally requires Transmission Operators to
16 develop and implement a restoration plan approved by the Reliability Coordinator (i.e.,
17 MISO)). EOP-005-3 also has requirements for the entities operating the generators
18 identified as blackstart resources in a restoration plan. The use of blackstart resources is
19 required to restore the shut-down area. Due to the federal and state regulatory limitations
20 placed on ITCT and its independent nature, ITCT is prohibited from owning generating
21 facilities. Thus, it is necessary for ITCT to partner with generation owners, such as DTE,
22 to establish the required blackstart resources.

Blackstart resources are procured through contracts with generation owners to complete and maintain a viable SRP. A blackstart unit is one that can start on its own power without support from the grid in the event of a major grid event, such as the 2003 blackout; which estimates suggest cost the U.S. economy between \$4 and \$10 billion, and the Detroit area alone \$220 million.¹ Blackstart resources are essential to establishing grid control and restarting power plants following a grid blackout and are critical to the safety and resilience of the grid, public safety, and the economy. Construction of DTE's blackstart resources are nearly complete, and DTE has requested approval of the remaining funding for blackstart resources that support ITC's System Restoration Plan ("SRP").

Q. Is there a current need in Michigan for blackstart resources?

A. Yes. As the generation fleet continues to undergo an unprecedented transformation, blackstart resources are being lost due to conventional generation retirements across the nation. MISO's Local Resource Zone 7 is no exception. Local Resource Zone 7 is losing a number of blackstart resources due to generation retirements, and blackstart resources are and will continue to be critical for ITC's SRP in DTE's service territory. To ensure Michigan has sufficient blackstart resources, ITC (parent to ITCT) formalized a state-wide RFP for new blackstart resources, to which DTE responded with the economical solutions included in this case. DTE's investments will ensure that Michigan is prepared for any unforeseen system disturbances through a reliable and resilient SRP. DTE should be

¹ See "The Economic Impacts of the August 2003 Blackout," Electric Consumer Research Council (ELCON), February 2, 2004 available at <https://www.nrc.gov/docs/ML1113/ML111300584.pdf>.

1 commended on actively pursuing its blackstart resource plan and working to improve the
2 reliability and security of Michigan's electric grid.

3 **Q. Are blackstart resources generally subject to confidential treatment?**

4 A. Yes. It is also important to note that these blackstart resource projects are intended for
5 use in critical grid events and preserving the security of these resources is of paramount
6 importance.

7 **Q. What does ITCT recommend with regard to DTE's blackstart resource costs?**

8 A. ITCT requests that the Commission approve the remaining costs for these projects in full
9 without disallowance or further conditions.

10 **Q. Does that conclude your testimony?**

11 A. Yes.

**STATE OF MICHIGAN
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MICHIGAN PUBLIC SERVICE COMMISSION**

In the matter of the Application of DTE)
ELECTRIC COMPANY for authority to)
increase its rates, amend its rate schedules)
and rules governing the distribution and)
supply of electric energy, and for)
miscellaneous accounting authority.)

Case No. U-21534

REBUTTAL TESTIMONY OF PUSHKAR CHINDHADE

1 **Q. Please state your name and business address.**

2 A. My name is Pushkar Chindhade. My business address is 27175 Energy Way, Novi,
3 Michigan 48377.

4 **Q. By whom are you employed and in what capacity?**

5 A. I am the Principal Operations Engineer for ITC Holdings Corp. ("ITC"), parent company to
6 ITC*Transmission* ("ITCT").

7 **Q. Are you the same Pushkar Chindhade who filed direct testimony in this proceeding**
8 **on behalf of ITCT?**

9 A. Yes.

10 **Q. What is the purpose of your rebuttal testimony?**

11 A. I will respond to MPSC Staff's recommended partial disallowances for the three Blackstart
12 Projects and ABATE's request to disallow all projected capital expenditures associated
13 with the Blackstart Projects. Specifically, I will respond to ABATE's allegations that the
14 Blackstart Projects lack support and explanation.

1 **Q. Do you sponsor any exhibits with your rebuttal testimony?**

2 A. No, I do not.

3 **Q. What is MPSC Staff's position on the Blackstart Projects?**

4 A. MPSC Staff recommends a 14 percent disallowance for the DTE's capital expenditure
5 requests for the Blackstart Projects. (DeCooman Direct, pp 9-10.) According to MPSC
6 Staff "it is unreasonable to support the requested amounts when the Company has
7 consistently overestimated costs for the Blackstart Projects." (DeCooman Direct, p 9.)

8 **Q. What is your response to MPSC Staff's position?**

9 A. Blackstart resources are absolutely crucial to restarting our electric grid. That need can
10 come at times of inclement weather or other unanticipated emergencies. Blackstart
11 capable generation resources should be considered a high priority asset and essential to
12 the energy infrastructure of the state, Local Resource Zone 7, and the region. The
13 Commission should support the Blackstart Projects as an essential component to the
14 state's energy security, particularly as our grid becomes increasingly complex and
15 blackstart resources are retired.

16 **Q. What is ABATE's position on the Blackstart Projects?**

17 A. ABATE recommends that the Commission "Disallow all projected capital expenditures
18 associated with the [Blackstart Projects] from rate base." (York Direct, p 23.) ABATE
19 argues that "ratepayers should not be responsible for unsubstantiated costs that have not
20 been demonstrated to be reasonably likely to be incurred by DTE in the bridge period or
21 projected test year." (*Id.*) ABATE looks to two of the Blackstart Project and in turn takes
22 issue with redactions on confidential documents, which it argues inhibited its ability to

1 “independently review and assess the scope of this project, project timelines, or any
2 revisions that have occurred.” (York Direct, p 24, 25.)

3 **Q. What is your response to ABATE’s position on the Blackstart Projects?**

4 A. ABATE’s objection to the Blackstart Projects rests primarily on its inability to independently
5 review confidential documents that contain highly sensitive information that impacts the
6 security of the electric grid. The Commission has recognized that inclusion of the
7 Blackstart Projects in rate base is appropriate to support the North American Electric
8 Reliability Corporation’s Blackstart plan. (Case No. U-21297, December 1, 2023 Order at
9 43.)¹ The Commission also determined that the Blackstart Projects were important to
10 maintain grid security and that DTE had provided enough information to support recovery
11 of the costs. (*Id.*) ABATE continues to request information—and complain about redacted
12 information—that DTE is obligated to safeguard and keep confidential. DTE should not
13 be penalized for complying with its obligations with regard to confidentiality. Both ABATE
14 and MPSC Staff acknowledge that DTE has provided updated scoping documents with
15 updated project estimates in this case. (See Exhibit AB-2.) DTE has provided the parties
16 to this case with the information it is able to disclose without compromising the security of
17 the electric grid or violating its other obligations to maintain the confidentiality of these
18 documents. The Commission should remain consistent with its position in U-21297 that
19 no further disclosure of information regarding the Blackstart Projects is appropriate.

¹ Here, the Commission refers to NERC’s Blackstart plan, though it is believed the Commission intended to cite to NERC’s Standards regarding system restoration from blackstart resources.

1 **Q. Has ITCT's position regarding the Blackstart Projects changed from the position**
2 **stated in your direct testimony?**

3 A. No, it has not. ITCT requests that the Commission approve the remaining costs for these
4 projects in full without disallowance or further conditions.

5 **Q. Does that conclude your rebuttal testimony?**

6 A. Yes.

1 JUDGE WALLACE: And there were no
2 exhibits for ITC, correct?

3 MR. OLIVA: No. ITC rests its case.

4 JUDGE WALLACE: Thank you very much,
5 Ms. Flower. All right. Mr. Bright.

6 MR. BRIGHT: Good afternoon, your Honor.
7 At this time, I move to admit -- excuse me -- I move to
8 bind in the testimony submitted on behalf of Electrify
9 America, LLC, in the this proceeding. Two witnesses
10 submitted testimony on behalf of Electrify America.

11 The first is Rhiannon Davis. Ms. Davis
12 submitted direct testimony in this proceeding, consisting
13 of a cover page, a table of contents, and eight pages of
14 questions and answers. Ms. Davis also submitted Revised
15 Direct Testimony, consisting of a cover page, a table of
16 contents, and eight pages of questions and answers. In
17 conjunction with that revised direct testimony,
18 Ms. Davis -- excuse me. I'll cover that testimony first.
19 Ms. Davis also submitted rebuttal testimony, consisting
20 of a cover page, table of contents, and seven pages of
21 questions and answers.

22 Electrify America, LLC, also, another
23 witness appeared on behalf of the Company, Jigar J. Shah,
24 submitted direct testimony in this proceeding, consisting
25 of a cover page, table of contents, and seven pages of

Penn Reporting, LLC - lori.penn@yahoo.com

1 questions and answers. Mr. Shah also filed Revised
2 Direct Testimony, consisting of a cover page, table of
3 contents, and seven pages of questions and answers.

4 Ms. Davis and Mr. Shah -- so, sorry, I'll
5 stop there. I move to bind in the testimony of Ms. Davis
6 and Mr. Shah in this proceeding.

7 JUDGE WALLACE: O.K. Is there any
8 objection to binding in the revised direct testimony of
9 Ms. Davis?

10 Hearing none, the testimony is bound in.

11 Is there any objection to binding in the
12 rebuttal testimony of Ms. Davis?

13 Hearing none, the testimony is bound in.

14 Is there any objection to binding in the
15 revised direct testimony of Mr. Shah?

16 Hearing none, the that testimony is bound
17 in.

18 (Testimony bound in.)

19 - - -

STATE OF MICHIGAN**BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION**

In the matter of the Application of **DTE** :
ELECTRIC COMPANY for authority to : Case No. U-21534
increase its rates, amend its rate schedules and :
rules governing the distribution and supply of : ALJ Sally Wallace
electric energy, and for miscellaneous :
accounting authority.

REVISED DIRECT TESTIMONY OF**RHIANNON DAVIS****ON BEHALF OF****ELECTRIFY AMERICA, LLC****July 26, 2024**

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**DIRECT TESTIMONY
OF
RHIANNON DAVIS**

I. QUALIFICATIONS AND DIRECT TESTIMONY OF RHIANNON DAVIS

Q. Please state your name, business address, and by whom you are employed.

A. My name is Rhiannon Davis. My business address is 1500 Opportunity Way, Suite 1500, Reston, Virginia 20190. I am employed by Electrify America, LLC (“Electrify America”) as the Director of Government Affairs.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of Electrify America. To date, Electrify America has built a coast-to-coast network of Direct Current (“DC”) Fast Charging (“DCFC”) stations across over 900 locations and with over 4,000 individual DC fast chargers in total, including 9 locations with 42 individual DC fast chargers in Michigan. Within DTE Electric Company’s (“DTE”) service territory, Electrify America currently operates 3 stations with 14 individual DC fast chargers, with more in development. The chargers range from 150 kW to 360 kW of power based on anticipated needs and use cases, as well as available real estate and power. The ultra-fast 360 kW chargers are among the most powerful public chargers on the market today, capable of recharging speeds close to gasoline fueling.

Q. Please state your educational background and professional experience.

A. I attended Barnard College of Columbia University and earned a B.A. in Economics. I also attended Georgetown University, where I earned an M.S. in Foreign Service, with a

1 concentration in Global Commerce & Finance. Prior to Electrify America, I worked at
2 San Diego Gas & Electric for six years, where I was a Policy Manager for the utility's
3 clean transportation program and its state government affairs office. I worked with
4 government representatives, coordinated with industry stakeholders, and advised senior
5 SDG&E leadership on state policy regarding a range of utility issues, including
6 transportation electrification ("TE"), distribution system planning, energy storage,
7 renewable energy generation, and energy efficiency. Prior to that, I served at the U.S.
8 Department of Energy for nine years, where I held roles of increasing responsibility in the
9 Office of International Affairs, including Director (Acting) of American Affairs. I led
10 policy development for DOE's engagement in the Western Hemisphere and worked with
11 companies, foreign governments, and other federal agencies to advance U.S. energy and
12 climate policy in the region. In my current role as Director of Government Affairs, I lead
13 Electrify America's advocacy efforts across local, state and federal governments,
14 including on legislative, regulatory, and utility policy.

15
16 **Q. What is the purpose of your testimony?**

17 A. The purpose of my testimony is to provide Electrify America's perspective on DTE's
18 proposed programs supporting public DCFC charging, and to suggest specific
19 modifications that can better support DCFC deployment in DTE's service territory.¹

20
21 **Q. Please introduce the witnesses providing testimony on behalf of Electrify America in**
22 **this proceeding.**

¹ See Case No. U-21534, Direct Testimony of Pina Bennett at PB-45, line 24 through PB-47, line 17.

A. In addition to myself, Jigar Shah is providing testimony on behalf of Electrify America in this proceeding. Mr. Shah’s testimony will focus specifically on the proposed EV Fast Charger Rate², as well as the company’s proposed modifications to its calculation of its Contribution in Aid of Construction.³

Q. Are you sponsoring any exhibits in this case?

A. ~~No, I am not.~~ Yes. I am sponsoring the following exhibit to my testimony:

- Exhibit EA-1 (EA-RD-1): Compiled discovery responses.

II. DTE’s PROPOSED PUBLIC CHARGING PROGRAMS

Q. Can you provide an overview of DTE’s proposed Transportation Electrification Plan (“TEP”) rebate programs related to public charging?

A. Yes. As discussed by DTE Witness Bennett, the Michigan Public Service Commission (“Commission”) requested DTE to develop a permanent TEP that built upon its previous Charging Forward program, which was aimed at supporting various sectors of transportation electrification within its service territory.⁴ DTE’s proposed TEP includes two separate rebate programs aimed at supporting the deployment of public charging: (1) a rebate of \$70,000 per on-route DCFC installed on-route public fast charging in disadvantaged communities (“DACs”) and rural areas, and (2) a \$50,000 rebate per on-route DCFC deployed in other areas⁵.

² See Case No. U-21534, Direct Testimony of Aaron Willis at AW- 34, line 15 through AW- 36, line 17.

³ *Id.* at AW-45, line 22 through AW-46, line 2.

⁴ Direct Testimony of Pina Bennett at PB-13, line 21 through PB-14, line 6.

⁵ Direct Testimony of Pina Bennett at PB-46, lines 7-9.

1 **Q. What are the participation criteria an applicant must meet to receive these rebates?**

2 A. First, DTE defines on-route DCFCs as those that are “within one mile of a major
3 throughway exit,”⁶ with major throughway defined as “a high-traffic road that is likely to
4 be a limited access Interstate or State highway.”⁷ Second, participating customers must
5 “install a qualified, networked charger (similar to the Business Charger Rebate program
6 today), authorize the network provider to share charger data with DTE Electric, and
7 commit to 97% charger uptime.”⁸ Customers seeking to qualify for the DAC on-route
8 rebate must demonstrate that the DCFC is being sited in a community identified as
9 disadvantaged by the Michigan State Plan for EV Infrastructure Deployment.⁹
10 Customers seeking to qualify for the rural on-route rebate must demonstrate that the
11 DCFC is being sited in a community identified as rural on the U.S. Department of
12 Transportation Rural Eligibility Map.¹⁰

13
14 **Q. What is your perspective on these participation requirements?**

15 A. Most of these requirements are aligned with DTE’s overall goal of supporting the
16 development of DCFC within its service territory.¹¹ However, Electrify America is
17 strongly opposed to the 97% uptime requirement associated with DTE’s proposed on-
18 route DCFC rebates. The primary reason for Electrify America’s opposition is a
19 competitive consideration. As stated above, DTE requires recipients of its on-route

⁶ Direct Testimony of Pina Bennett at PB-46, lines 4-5.

⁷ See Exhibit EA-1 (EA-RD-1), Case No. U-21534, DTE’s Response to EVgoDE-1.5.

⁸ Direct Testimony of Pina Bennett at PB-47, lines 11-12.

⁹ Direct Testimony of Pina Bennett at PB-47, lines 14-15 *citing* Michigan State Plan for EV Infrastructure Deployment available at <https://www.michigan.gov/mdot/travel/mobility/initiatives/nevi>, accessed December 18, 2023.

¹⁰ Direct Testimony of Pina Bennett at PB-47, lines 16-17.

¹¹ *See generally* Direct Testimony of Pina Bennett at PB-46, lines 1-25.

1 DCFC rebates to commit to sharing such data with DTE, and DTE intends to track
2 charger uptime to “guide necessary adjustments to program parameters” and the “overall
3 effectiveness of the TEP.”¹² While Electrify America understands that DTE is seeking to
4 ensure ratepayer investments in public DCFC are justified, DTE Witness Bennett notes
5 that DTE “believes that there is merit in the utility owning and operating...chargers,” but
6 “opted not to include any utility-owned charging with its *initial* TEP” (emphasis
7 added).¹³

8
9 Uptime data is confidential and competitively sensitive information. If the Commission
10 allows for utility-owned investments in the future, DTE will become a direct to
11 competitor to Electrify America and other operators of DCFC sites within its service
12 territory. However, unlike Electrify America and its competitors, DTE will be in
13 possession of years of confidential and competitively sensitive uptime data from every
14 customer that seeks an on-route DCFC rebate, thereby giving DTE a significant
15 competitive advantage if it is provided the authority to develop and own DCFC sites in
16 the future. Therefore, Electrify America strongly opposes a requirement that it provide
17 confidential and competitively sensitive uptime data to a potential future competitor as a
18 condition of receiving on-route DCFC rebates.

19
20 Secondly, as a practical consideration – there are a variety of factors out of a DCFC
21 site operator’s control that may impact uptime, such as force majeure and extreme
22 weather, charging cord vandalism, or power outages. Moreover, DTE’s testimony does

¹² Direct Testimony of Pina Bennett at PB-52, lines 3-17.

¹³ Direct Testimony of Pina Bennett at PB-35, lines 8-13.

1 not clarify what metrics it is seeking rebate recipients to use to calculate uptime. There
2 are a variety of standards and methods to calculate uptime, some of which require many
3 more manual calculations, tracking, sorting, and administrative oversight than others. To
4 put it simply – calculating and providing uptime data to DTE would be a much more
5 onerous and time-consuming process than is currently contemplated in DTE’s testimony.
6

7 **Q. Do you have any other concerns with DTE’s proposed public charging offerings?**

8 A. Yes. DTE has proposed to not provide rebates for “destination charging” site hosts
9 installing a DCFC, noting that the economics for these site hosts may not be as
10 challenging.¹⁴ DTE defines destination chargers as those that “are located at businesses
11 like hotels, restaurants, or grocery stores, that may not be located within one mile of a
12 major thoroughway.”¹⁵ DTE supports the exclusion of providing rebates for such sites,
13 stating that “these businesses have other incentives and motivations for charger
14 installation, like increasing foot traffic and attracting customers to their businesses.”¹⁶
15

16 Electrify America disagrees with DTE’s proposal to make destination charging sites
17 ineligible for rebates. As DTE Witness Bennett states, “[s]takeholders ranked all the
18 public charging subsegments, including on-route and destination charging, the most
19 important for utility action because the availability of public charging is critical to
20 reducing range anxiety, which is a key barrier to EV adoption.”¹⁷ However, DTE,
21 without providing analysis or feedback for its determination that such sites have other

¹⁴ *Id.* at PB-47, lines 1-7.

¹⁵ See Exhibit EA-1 (EA-RD-1), Case No. U-21534, DTE’s Response to EVgoDE-1.12.

¹⁶ See Exhibit EA-1 (EA-RD-1).~~*Id.*~~

¹⁷ Direct Testimony of Pina Bennettt at PB-46, lines 1-4.

1 “incentives and inherent benefits,” has declared such sites ineligible for rebates. Electrify
2 America, like other companies that operate DCFC sites, frequently partners with existing
3 businesses to deploy DCFCs at pre-existing locations of that business. These
4 partnerships are beneficial to both parties, as the relationship de-risks the economics of
5 operating such sites and can lead to more rapid and cost-effective deployment of DCFCs
6 generally. Additionally, by designing the public charging rebates in the way they have,
7 DTE is artificially limiting the number available sites at which the public charging rebate
8 criteria can be met. This would be a detriment to DTE’s stated goals of increasing
9 customer confidence in charging infrastructure¹⁸, as well as Michigan’s overall goal of
10 building the infrastructure necessary to support two million electric vehicles by 2030.¹⁹
11 Therefore, Electrify America recommends that DTE allow destination charging sites
12 deploying DCFCs to be eligible for the same rebates as other on-route charging sites.

13
14 **III. SUMMARY OF ELECTRIFY AMERICA’S RECOMMENDATIONS**
15 **REGARDING DTE’S PROPOSED PUBLIC CHARGING PROGRAMS**

16 **Q. Can you please restate your recommendations with respect to DTE’s proposed**
17 **public charging programs?**

18 **A.** Yes. My recommendations are as follows:

- 19 • Remove the requirement that recipients of on-route DCFC rebates must commit to
20 97% uptime of their stations and share confidential and competitively sensitive
21 uptime information with DTE; and

¹⁸ *Id.* at PB-46, lines 5-6.

¹⁹ Michigan Department of Environment, Great Lakes, and Energy, *MI Healthy Climate Plan* at 37, April 2022 (available at: <https://www.michigan.gov/egle/-/media/Project/Websites/egle/Documents/Offices/OCE/MI-Healthy-Climate-Plan.pdf?rev=d13f4adc2b1d45909bd708cafccbffa>).

- 1 • Allow destination charging sites deploying DCFCs to be eligible for the same
2 rebates as other on-route charging sites.

3

4 **Q. Does that conclude your testimony?**

5 **A.** Yes, it does.

6

STATE OF MICHIGAN**BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION**

In the matter of the Application of **DTE** :
ELECTRIC COMPANY for authority to : Case No. U-21534
increase its rates, amend its rate schedules and :
rules governing the distribution and supply of : ALJ Sally Wallace
electric energy, and for miscellaneous :
accounting authority.

REBUTTAL TESTIMONY OF**RHIANNON DAVIS****ON BEHALF OF****ELECTRIFY AMERICA, LLC****August 16, 2024**

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**REBUTTAL TESTIMONY
OF
RHIANNON DAVIS**

I. INTRODUCTION

Q. Please state your name, business address, and by whom you are employed.

A. My name is Rhiannon Davis. My business address is 1950 Opportunity Way, Suite 1500, Reston, Virginia 20190. I am employed by Electrify America, LLC (“Electrify America”) as the Director of Government Affairs.

Q. Did you file direct testimony in this proceeding on behalf of Electrify America?

A. Yes. I submitted Direct Testimony on behalf of Electrify America on July 26, 2024, and Revised Direct Testimony on August 13, 2024.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to respond to the direct testimony of Michigan Public Service Commission (“Commission”) staff (“Commission Staff”) and the Michigan Attorney General.

Q. Are you sponsoring any exhibits with this testimony?

A. Yes, in addition to Exhibit EA-1 (EA-RD-1) included with my direct testimony, I will be sponsoring the following exhibits:

- Exhibit EA-3 (EA-RD-2) - Compiled Responses of Michigan Public Service Commission Staff to EVgo’s First Discovery Request

1 **Q. Were these exhibits prepared by you or under your direction?**

2 A. Yes, they were.

3

4 **Q. Are there any aspects of testimony provided by other parties not specifically**
5 **addressed in your rebuttal testimony?**

6 A. Yes, any lack of response in my rebuttal testimony to the positions of other parties put
7 forth in their direct testimony should not be construed as an indication that I agree with
8 the information provided or arguments set forth therein. I have limited my rebuttal
9 testimony to testimony regarding the Business Charger Rebate program, and DTE's
10 proposed capital expenditures related to electric vehicle ("EV") charging infrastructure.

11

12 **II. RESPONSE TO MICHIGAN PUBLIC SERVICE COMMISSION STAFF'S**
13 **DIRECT TESTIMONY**

14 **Q. Can you provide an overview of the direct testimony submitted by Allan D.**
15 **Freeman on behalf of the Michigan Public Service Commission?**

16 A. Yes. In Mr. Freeman's direct testimony, he recommends an \$8,000,000 disallowance of
17 the proposed budget for DTE's Business and eFleet Charger Rebates program, and a
18 \$1,000,000 disallowance for the Residential Customer Rebate program.¹ As Mr.
19 Freeman points out, the Business and eFleet Charger Rebate program is a "foundational
20 piece of the Company's overall \$24,980,000 proposed [electric vehicle] budget request."²
21 However, Mr. Freeman suggests the \$8,000,000 disallowance because he is

¹ Case No. U-21534, Direct Testimony of Allan D. Freeman on behalf of the Michigan Public Service Commission at page 8, lines 9-12.

² *Id.* at page 8, lines 18-20.

1 “uncomfortable with this large, requested amount,” as it “represents a significant increase
 2 from past rebate programs.”³ In response to discovery, Mr. Freeman notes that his
 3 reference to the “past rebate programs” refers to the previous iteration of these programs
 4 in Case No. 21297.⁴ Mr. Freeman argues that DTE should take a more “scaled down
 5 rebate effort” that is more deliberate⁵, stating that the “[electric vehicle] marketplace is
 6 still evolving and in the future larger rebates may be appropriate at that time.”⁶

7
 8 **Q. Do you agree with Mr. Freeman’s position?**

9 A. No. Mr. Freeman does not provide adequate support for his recommendations, aside
 10 from his statement that the rebates are too significant and that a more judicious approach
 11 is warranted. Mr. Freeman, notably, does not explain *why* his recommendations should
 12 be adopted by the Commission beyond general, unsupported opinions. By contrast,
 13 multiple parties to this proceeding, including Citizens Utility Board of Michigan, Sierra
 14 Club, Michigan Environmental Council, and Natural Resources Defense Council⁷; EVgo
 15 Services, LLC (“EVgo”)⁸; and Natural Resources Defense Council; and Michigan
 16 Energy Innovation Business Council, Institute for Energy Innovation, and Advanced
 17 Energy United (collectively “MEIU”)⁹, all provide nuanced, well-supported
 18 recommendations as to why their modifications to DTE’s proposed expansion of the

³ *Id.* at page 8, lines 20-21.

⁴ See Exhibit EA-3 (EA-RD-2); Michigan Public Service Commission Staff’s Answer to EVgo-MPSC 1.01(b).

⁵ Direct Testimony of Allan D. Freeman at page 8, line 21 through page 9, line 2.

⁶ See Exhibit EA-3 (EA-RD-2); Michigan Public Service Commission Staff’s Answer to EVgo-MPSC 1.02(b).

⁷ See Case No. U-21534, Direct Testimony of Douglas B. Jester on behalf of Citizens Utility Board of Michigan, Sierra Club, Michigan Environmental Council, and Natural Resources Defense Council at pages 37-40.

⁸ See Case No. U-21534, Direct Testimony of Lindsey Stegall on behalf of EVgo Services, LLC at pages 7-16.

⁹ See Case No. U-21534, Direct Testimony of Dr. Laura S. Sherman on behalf of Natural Resources Defense Council; and Michigan Energy Innovation Business Council, Institute for Energy Innovation, and Advanced Energy United at pages 36-52.

Business Charger Rebate program should be approved by the Commission. For example, EVgo echoes the recommendation I stated with respect to the direct current fast charging (“DCFC”) rebate program, providing a thorough explanation and justification for its recommendation to include DCFC rebates for destination charging sites.¹⁰ Similarly, MEIU provides ample support for the same position, recommending the removal of DTE’s proposed eligibility requirement for the DCFC rebate program obligating DCFC sites receiving the rebate to be located within one mile of a major throughway.¹¹ Mr. Jester, on behalf of Citizens Utility Board of Michigan, Sierra Club, Michigan Environmental Council, and Natural Resources Defense Council, provides significant support for its position that DTE clarify that DCFC rebate funds may be used to defray utility make-ready, customer make-ready, and EV charger costs.¹² These parties all provide thorough analysis and support for their positions, while Mr. Freeman does not. Therefore, Electrify America recommends that the Commission decline to adopt Mr. Freeman’s proposal to reduce the Business Charger Rebate and eFleet Charger Rebate programs by \$8,000,000, as such a position is not sufficiently supported by his testimony or responses to discovery.

III. RESPONSE TO THE MICHIGAN ATTORNEY GENERAL

Q. Please provide an overview of Mr. Coppola’s recommendations on behalf of the Michigan Attorney General regarding DTE Electric Company’s (“DTE”) proposed

¹⁰ Direct Testimony of Lindsey Stegall at page 14, line 17 through page 15, line 17.

¹¹ Direct Testimony of Dr. Laura S. Sherman at page 45, lines 1-9.

¹² Direct Testimony of Douglas B. Jester at page 38, line 16 through page 39, line 2.

1 **capital expenditures for Utility Make Ready (“UMR”) and the EV Charging**
2 **Forward Program.**

3 A. Mr. Coppola’s testimony proposes two reductions to DTE’s proposed capital
4 expenditures related to electric vehicle (“EV”) infrastructure: the first is a proposed
5 reduction of \$3,734,000 and \$10,173,000 to DTE’s proposed 2024 and 2025 UMR
6 expenditures¹³, and the second is a proposed reduction of \$6,979,000 and \$2,295,000 to
7 DTE’s proposed 2024 and 2025 EV Charging Forward capital expenditures.¹⁴ In support
8 of his position, Mr. Coppola makes a number of assertions regarding EV adoption,
9 including that “EVs are stockpiling at dealers’ lots,” “EV buyers often have been
10 dissatisfied with the actual driving range,” and that “software and equipment failures has
11 also created dissatisfaction and increased concerns and fear with prospective EV
12 buyers.”¹⁵ Because of this waning demand, Mr. Coppola argues, the Commission should
13 not approve DTE’s proposed capital expenditures for UMR and the EV Charging
14 Forward program.¹⁶

16 **Q. Do you agree with Mr. Coppola’s recommendations?**

17 A. No, I do not. As DTE Witness Bennett describes in her direct testimony, EV sales in its
18 service territory have grown at a compound annual growth rate of 90% from 2019 to
19 2022.¹⁷ With almost 46,000 EVs in its service territory currently, DTE estimates that by
20 the end of its proposed transportation electrification program in 2028, this figure will

¹³ Case No. U-21534, Direct Testimony of Sebastian Coppola on behalf of the Michigan Attorney General at page 26, lines 11-12.

¹⁴ *Id.* at page 55, lines 8-9.

¹⁵ *Id.* at page 25, lines 11-15.

¹⁶ *Id.* at page 26, lines 3-12; page 55, lines 6-11.

¹⁷ Case No. U-21534, Direct Testimony of Pina Bennett at PB-23, lines 8-9.

1 increase to 326,000 EVs.¹⁸ This estimate is the result of a comprehensive EV registration
2 forecast, based on which DTE estimates that approximately 238,000 chargers will be
3 needed within DTE's service territory by 2028 to support the increased demand for
4 charging infrastructure.¹⁹ Moreover, DTE estimates that this deployment of charging
5 infrastructure will require a nearly \$1.9 billion investment.²⁰ Like its estimates regarding
6 EV adoption and EV charger deployment within its service territory, DTE provides
7 detailed analysis to support its conclusions, stating its cost assumptions and methodology
8 used to support this estimated investment.²¹

9
10 Mr. Coppola's rebuttal testimony disregards this comprehensive analysis and fails to
11 provide any analysis supporting his contention that EV adoption will be less than what
12 DTE has stated. Instead, he recommends significant reductions to DTE's proposed
13 capital expenditures based on broad, unfounded opinions about EV adoption within
14 DTE's service territory. Absent from Mr. Coppola's testimony is any reference to or
15 contradiction of DTE Witness Bennett's analysis, nor does Mr. Coppola provide any
16 citations for his statements regarding EV adoption. As such, Electrify America
17 recommends that the Commission disregard Mr. Coppola's recommendations, as the
18 justification for his recommendations is directly contradicted by the analysis set forth in
19 DTE's direct testimony.

20
21 **Q. Does that conclude your testimony?**

¹⁸ *Id.* at lines 11-14.

¹⁹ *Id.* at PB-25, lines 8-16.

²⁰ *Id.* at PB-28, lines 22-24.

²¹ *Id.* at PB-30, line 3 through PB-31, line 20.

1 A. Yes, it does.

STATE OF MICHIGAN**BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION**

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accounting authority.

REVISED DIRECT TESTIMONY OF**JIGAR J. SHAH****ON BEHALF OF****ELECTRIFY AMERICA, LLC****July 26, 2024**

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**DIRECT TESTIMONY
OF
JIGAR J. SHAH**

I. QUALIFICATIONS AND DIRECT TESTIMONY OF JIGAR J. SHAH

Q. Please state your name, business address, and by whom you are employed.

A. My name is Jigar J. Shah. My business address is 1500 Opportunity Way, Suite 1500, Reston, Virginia 20190. I am employed by Electrify America, LLC (“Electrify America”) as the Director of Energy Services.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of Electrify America.

Q. Please state your educational background and professional experience.

A. As the Director of Energy Services, I am responsible for optimizing Electrify America’s energy portfolio. I have a Bachelor of Science degree in Electrical and Computer Engineering, with a minor in Business, from Cornell University, and a Master of Engineering degree in Electrical Engineering from Princeton University. Prior to my role at Electrify America, I was a Principal Consultant at West Monroe Partners, advising utility clients on smart grid modernization topics, rate structures, and energy storage. Previously, I was a Senior Researcher at Envision Energy focused on wind farm (plant level) controls and analytics, and an Edison Engineer at General Electric Global Research focused on wind turbine control systems and distributed energy resource controls, including for electric vehicle fleet charging to minimize demand charge costs. I have

1 journal publications and issued patents in the fields of electric vehicle charging, vehicle-
 2 grid integration, and renewable energy.

3
 4 **Q. What is the purpose of your testimony?**

5 A. The purpose of my testimony is to provide Electrify America’s perspective on DTE’s
 6 proposed EV Fast Charger Rate²⁰, as well as the company’s proposed modifications to
 7 its calculation of its Contribution in Aid of Construction.²¹ I will also provide
 8 recommendations regarding DTE’s existing General Service D3 rate, the expiration of
 9 the rate, and the one megawatt (“MW”) limitation for those taking service on the rate.²²

10
 11 **Q. Are you sponsoring any exhibits in this case?**

12 A. ~~No, I am not.~~ Yes, I am sponsoring the following exhibit to my testimony:

- 13 • Exhibit EA-2 (EA-JJS-1): Compiled discovery responses.

14
 15 **II. DTE’S PROPOSED EV FAST CHARGER RATE**

16 **Q. Please describe DTE’s proposed EV Fast Charger Rate.**

17 A. DTE’s proposed electric vehicle (“EV”) Fast Charger Rate is “designed as a secondary
 18 voltage rate with time of use power supply pricing which varies by time period and
 19 season.”²³ To develop the determinants and rate design for the EV Fast Charger Rate,

²⁰ See Case No. U-21534, Direct Testimony of Aaron Willis at AW- 34, line 15 through AW- 36, line 17.

²¹ *Id.* at AW-45, line 22 through AW-46, line 2.

²² General Service Rate D3 as described in DTE Electric Company Rate Book for Electric Service, available at <https://www.michigan.gov/mpsc/-/media/Project/Websites/mpsc/consumer/rate-books/electric/dte/dteelcur.pdf?rev=e0168ab41b8245bba5f3ca7631c29614&hash=D16249E421EC5AB0F5C3A2304B0FB0F7>, accessed July 23, 2024; See also Direct Testimony of Pina Bennett at PB-55, FN 48.

²³ Direct Testimony of Aaron Willis at AW- 34, lines 17-18.

1 DTE used historical data from 21 chargers taking service from the company.²⁴ As
 2 acknowledged by DTE Witness Willis, the sample size on which the rate was developed
 3 is small and does not include all EV fast chargers served by DTE.²⁵ Moreover,
 4 developing a rate on such a small cost of service class could “lead to volatile
 5 determinants, [cost of service], and rate design from case to case and individual
 6 customers may have an outsized impact on the overall class.”²⁶ Ultimately, DTE states
 7 that the EV Fast Charger Rate should not be implemented at the conclusion of this case,
 8 nor did it propose a corresponding tariff be approved.²⁷

9
 10 **Q. What is Electrify America’s perspective on the proposed EV Fast Charger Rate?**

11 A. As an initial matter, Electrify America is supportive of the development of a beneficial
 12 rate to support EV adoption in DTE’s service territory. However, Electrify America
 13 shares DTE Witness Willis’ concerns about the sample size and quality from which the
 14 EV Fast Charger Rate was developed²⁸, and agrees with DTE that the EV Fast Charger
 15 Rate based on a separate rate class should not be approved as proposed at the conclusion
 16 of this case. As DTE notes in its testimony, it was directed by the Michigan Public
 17 Service Commission (“Commission”) to “conduct a separate [cost of service study] to
 18 allocate appropriate costs to fast charging and design and propose rates for this specific
 19 class of customer in its next rate case.”²⁹ While DTE has met the Commission’s directive

²⁴ *Id.* at AW-35, lines 12-19.

²⁵ *Id.* at AW-36, lines 1-10.

²⁶ *Id.*

²⁷ See Exhibit EA-2 (EA-JJS-1), Case No. U-21534, DTE Response to EADE-1.3a.

²⁸ Direct Testimony of Aaron Willis at AW-35, lines 22-23.

²⁹ Case No. U-21297, *In the matter of the application of DTE Electric Company for authority to increase its rates, amend its rate schedules and rules governing the distribution and supply of electric energy, and for miscellaneous accounting authority*, Order at 342 (December 1, 2023).

1 from Case No. U-21297, it is apparent that the proposed EV Fast Charger Rate based on a
 2 separate rate class is flawed and should not be approved by the Commission. Therefore,
 3 Electrify America agrees with DTE and recommends that the Commission decline to
 4 implement the proposed EV Fast Charger Rate or the creation of a separate rate class for
 5 DCFC at the conclusion of this proceeding.

6
 7 **Q. Does Electrify America have any recommendations for the Commission on rates for**
 8 **DCFC customers?**

9 A. Yes. Currently, DTE offers its General Service Rate D3 for DCFC site hosts.³⁰ This rate
 10 does not have demand charges, but eligibility for the D3 rate is restricted to DCFC sites
 11 that are less than one megawatt.³¹ As DTE notes in its tariff, “service may be available to
 12 loads in excess of 1000 kW for situations where significant modifications to service
 13 facilities are not required to serve the excess load,” but, “the 1000 kW discretionary
 14 demand restriction does not apply to service provided to Electric Vehicle Fast-Charging
 15 Stations until June 1, 2026 for existing stations and for two years after beginning service
 16 for new stations.”³² As the Commission succinctly put it in Case No. U-21297, the
 17 demand charge relief for DCFC sites greater than 1 MW that take service under the D3
 18 rate can only be relied on until June 2026.³³ While DTE contends that the vast majority
 19 of DCFC installations will remain below the 1 MW threshold and indicates it will revisit
 20 the D3 rate structure if necessary after June 2026³⁴, this provides little comfort to current

³⁰ Direct Testimony of Pina Bennett at PB-47, lines 4-6.

³¹ Direct Testimony of Pina Bennett at PB-47, lines 4-6 *citing* DTE Electric Company, M.P.S.C. No. 1- Electric, Tenth Revised Sheet No. D-18.00.

³² DTE Electric Company, M.P.S.C. No. 1- Electric, Tenth Revised Sheet No. D-18.00.

³³ Case No. U-21297, Order at 338.

³⁴ Direct Testimony of Pina Bennett at PB-55, FN 48.

DCFC sites greater than 1 MW. Given the timelines associated with DCFC site development and investment justification, which are often over a 10-year or longer period, two years of guaranteed demand charge relief is not a long enough period to provide enough cost certainty to Electrify America when it is making investment decisions in DTE’s service territory. DTE should therefore modify its tariff language to allow DCFC sites built before a specified date, preferably by 2028 or later, to be able to take service under the D3 rate.

III. DTE’S PROPOSED ELIMINATION OF ITS CONTRIBUTION IN AID OF CONSTRUCTION (“CIAC”) WAIVERS FOR CHARGING FORWARD CUSTOMERS

Q. Does DTE propose to make any rate book modifications as part of its transportation electrification plan (“TEP”)?

A. Yes. DTE proposes to delete the Charging Forward CIAC waiver in section C6.1(16) of Section C – Part I, Company Rules and Regulations.³⁵ DTE Witness Bennett states that as part of its TEP, DTE decided to no longer waive CIAC beyond revenue credits from the existing line extension policy in an effort to provide “positive rate impacts and affordability benefits accruing to all customers.”³⁶ DTE estimates that continuing with its current CIAC waiver would result in “15% of the total capital required for customer connections, based on historical data, needing to be funded through electric rates by other customers.”³⁷ The transition from a pilot to a permanent TEP, from DTE’s perspective,

³⁵ Direct Testimony of Pina Bennett at PB-51, lines 1-4.

³⁶ *Id.* at lines 8-12.

³⁷ See Exhibit EA-2 (EA-JJS-1), Case No. U-21534, DTE Response to EVgoDE-1.7.

1 necessitates that it align the CIAC policy for EV customers with that of all other
 2 customer connections.³⁸

3 **Q. Does Electrify America agree with DTE’s proposed modification to its CIAC waiver**
 4 **policy?**

5 A. No. As described above in the context of rates, cost certainty is imperative for Electrify
 6 America as it determines where it sites future DCFC locations. Part of Electrify
 7 America’s costs as it develops DCFC sites are the line extension costs imposed by
 8 utilities, and as DTE acknowledges, the capital costs associated with the development of
 9 DCFC sites can be significant.³⁹ Furthermore, the magnitude of such costs are not often
 10 known until very late in the process after significant development work has been
 11 committed, increasing project risk. Removing the CIAC waiver undercuts DTE’s goals
 12 of expanding public charging infrastructure and reducing range anxiety because it
 13 increases the already significant costs of DCFC site development and will likely serve to
 14 restrict future DCFC site development within its service territory. Furthermore, Electrify
 15 America notes that DTE’s positioning to potentially own and operate DCFC with
 16 ratepayer funds in a future TEP⁴⁰, in conjunction with its proposed removal of the CIAC
 17 waiver from its rate book⁴¹, may lead to reduced deployment in DTE’s service area. In
 18 turn, this would increase the potential for broader utility-owned and operated
 19 infrastructure to fill in the deployment gap, albeit at increased costs to ratepayers when
 20 compared to costs of maintaining the CIAC waiver. The Commission should note the
 21 competitive implications presented by DTE’s proposed removal of the CIAC waiver for

³⁸ See Exhibit EA-2 (EA-JJS-1).~~Id.~~

³⁹ Direct Testimony of Pina Bennett at PB-29, lines 8-11.

⁴⁰ Direct Testimony of Pina Bennett at PB-35, lines 8-13.

⁴¹ Direct Testimony of Pina Bennett at PB-51, lines 8-12.

EV customers, and maintain the CIAC waiver to reduce the long-term ratepayer contributions required to meet the state's transportation electrification goals.

IV. SUMMARY OF RECOMMENDATIONS

Q. Please restate the recommendations put forth in your testimony.

A. My recommendations are as follows:

- The Commission should agree with DTE and decline to implement the EV Fast Charger Rate at the conclusion of this proceeding;
- The Commission should modify the tariff language for the D3 rate and allow DCFC sites built before 2028 or later to be able to take service under the D3 rate.
- The Commission should reject DTE's proposal to remove its CIAC waiver for EV customers.

Q. Does this conclude your testimony?

A. Yes, it does.

1 MR. BRIGHT: I also move to admit the
2 Exhibits EA-1 through EA-3 that were submitted or
3 sponsored as, by both Ms. Davis and Mr. Shah in this
4 proceeding.

5 JUDGE WALLACE: Thank you. Is there any
6 objection to the admission of Exhibits EA-1 through EA-3?

7 Hearing none, those exhibits are
8 admitted.

9 MR. BRIGHT: Thank you. Electrify
10 America rests its case.

11 JUDGE WALLACE: Thank you.

12 COURT REPORTER: Can we go off the record
13 for one second?

14 JUDGE WALLACE: Absolutely. Off the
15 record.

16 (At 12:28 p.m., off-record discussion.)

17 JUDGE WALLACE: Back on the record.
18 Mr. Boehm.

19 MR. BOEHM: Good morning, your Honor. I
20 sent an email that you responded to prior to the binding
21 in session that we have decided that it would be
22 inappropriate to bind in Mr. Bieber's rebuttal testimony
23 given that it responds to an issue raised by CUB that is,
24 was struck from Mr. Jester's testimony in CUB's August 23
25 revision to that testimony; therefore, we have nothing to

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1 offer this morning.

2 JUDGE WALLACE: You have -- I'm sorry.
3 Did Mr. Bieber file direct testimony?

4 MR. BOEHM: No. Mr. Bieber only filed
5 rebuttal testimony.

6 JUDGE WALLACE: Got it. So Kroger is,
7 we're done, right, that's it for Kroger?

8 MR. BOEHM: Yes, yes.

9 JUDGE WALLACE: So we are not admitting
10 or binding in anything for Kroger. Thank you very much,
11 Mr. Boehm.

12 MR. BOEHM: Thank you, Judge.

13 JUDGE WALLACE: All right. Great Lakes
14 Renewable Energy Association.

15 MR. KESKEY: Your Honor, based upon the
16 stipulation of the parties, we move to enter into the
17 record the Direct Testimony of John Richter, which
18 consists of a cover page, a table of contents, and 69
19 pages of questions and answers. And along with that,
20 Mr. Richter, sponsors GLREA Exhibit 1, which comprises
21 his resume.

22 We also move to admit the Direct
23 Testimony of Robert Rafson, which consists of a cover
24 page and 14 pages of questions and answers, and he
25 sponsors an Exhibit GLREA-2, which consists of his
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1 resume.

2 And we'd also like to enter into the
3 record Exhibit GLREA Exhibits 3, 4, 5, and 6, which
4 comprise DTE discovery answers to various discovery
5 requests sent by GLREA to DTE, which discovery requests
6 are listed on the cover page of each exhibit and then are
7 attached in the exhibit itself. These three -- these
8 four exhibits, GLREA-3 through 6, were based upon
9 discussions with counsel for DTE and were agreed to be
10 exhibits, and they have also been sent to all the
11 parties.

12 With that, your Honor, we move to enter
13 into the record the designated testimony of John Richter
14 and of Robert Rafson, and GLREA Exhibits 1 through 6.
15 There is no rebuttal testimony, your Honor.

16 JUDGE WALLACE: Thank you, Mr. Keskey.
17 Is there any objection to binding in the direct testimony
18 of Mr. Richter?

19 Hearing none, the testimony is bound in.

20 Is there any objection to the admission
21 of Exhibit GLREA-1?

22 Hearing none, the exhibit is admitted.

23 Is there any objection to binding in the
24 direct testimony of Mr. Rafson?

25 Hearing none, the testimony is bound in.

1 Is there any objection to the admission
2 of Exhibits GLREA-2 through GLREA-6?

3 Hearing none, those exhibits are
4 admitted.

5 (Testimony bound in.)

6 - - -

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the Application of	)	
DTE ELECTRIC COMPANY	)	
for authority to increase rates, amend	)	Case No. U-21534
its rate schedules and rules governing the	)	
distribution and supply of electric energy, and	)	
<u>for miscellaneous accounting authority.</u>	)	

**DIRECT TESTIMONY
AND EXHIBIT
OF
JOHN RICHTER**

**On Behalf of
Great Lakes Renewable Energy Association**

July 26, 2024

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1 **II. QUALIFICATIONS**

2 **Q. Please state your name and business address.**

3 A. My name is John Richter, and I have no business address, because I am retired.

4 **Q. Who are you representing, and what is your title and role there?**

5 A. I'm representing The Great Lakes Renewable Energy Association (GLREA). I am on the
6 Board of Directors. I am also the Chairman of the Policy Committee.

7 **Q. Who is the GLREA?**

8 A. The GLREA is a 501(c)(3) (non-profit) corporation based in Michigan. Our Mission
9 Statement is to "Promote the Use of Renewable Energy in Michigan and in the Great
10 Lakes Region, By Empowering Our Members and the Public Through Advocacy,
11 Education and Strategic Collaboration." And our Vision Statement is: "We believe that
12 current and emerging clean, renewable energy solutions can provide 100% of the electrical
13 energy demand in the Great Lakes Region. Furthermore, we believe that increasing
14 development and access to clean, renewable energy that is locally produced, operated and
15 utilized supports economic development, creates new good paying jobs and is essential to
16 supporting healthier, more resilient communities that advance climate justice."

17 **Q. Please describe your educational background.**

18 A. I received a Bachelor of Science degree in Computer Engineering, with a minor in
19 Economics, from Oakland University in 1982. I did some graduate work in software
20 engineering at both Oakland University, and University of Detroit, Mercy. I did some
21 alternative energy coursework at Oakland Community College. I received a Master of
22 Science in Renewable Energy from Murdoch University in Perth, Australia in 2009. I've

1 been through training at Michigan State University's Institute for Public Utilities
2 Regulatory Research and Education's courses on rate making, and "grid school."

3 **Q. Please describe your relevant business experience.**

4 A. At Frontier Communications, I was the Senior Manager of Hardware Integration. In this
5 role, I performed request for proposals (RFPs) and request for quotes, set up the criteria for
6 evaluating the responses, engaged in purchase negotiations, and performed project
7 management for equipment installation, testing, and turn-up. I had a \$25M capital budget
8 for equipment purchases. I also created the Company's capacity forecasting model, and did
9 net present value (NPV) analysis to determine which equipment sites should be closed and
10 consolidated. I was promoted to Director, Product Platform Development, where I again
11 did RFPs and equipment selection. As a Sr. Product Development Manager at Global
12 Crossing, I created new business processes in support of new product launches.

13 During 2002, I consulted on renewable energy policy for the GLREA. In that role, I did a
14 presentation to Michigan legislators and staff on policies to incentivize renewable energy
15 deployments. I was one of three invited presenters to the Northeast and Midwest Caucus
16 meeting on a national RPS at the U.S. Capitol Building. And I was a member of the MPSC
17 Collaborative on Renewable Energy. Under contract with American Council for an Energy
18 Efficient Economy, I wrote a white paper on energy efficiency policy, which was
19 presented to the Governor of Michigan. I was also featured in the PBS documentary film,
20 *Michigan's Green Energy Economy*.

21 In 2010 and 2011, I was an adjunct instructor at Macomb Community College, teaching a
22 course on solar energy. My resume is provided as **GLREA Exhibit-1 (JR-1)**.

1 **Q. Have you previously presented testimony before the Michigan Public Service**
2 **Commission (“MPSC” or the “Commission”)?**

3 **A.** Yes, in the following cases:

- 4 ○ U-18091, DTE Energy PURPA case (remand)
- 5 ○ U-18232, DTE REP (reopened)
- 6 ○ U-20165, Consumers Energy IRP case
- 7 ○ U-20359, Indiana Michigan Power rate case
- 8 ○ U-20471, DTE Energy IRP
- 9 ○ U-20561, DTE Energy Rate case
- 10 ○ U-20713, DTE Energy Renewable Energy Plan
- 11 ○ U-21090, Consumers Energy IRP case
- 12 ○ U-21386, DTE Energy Rate case
- 13 ○ U-21193, DTE Energy IRP
- 14 ○ U-21224, Consumers Energy Rate case
- 15 ○ U-21172, DTE Energy Voluntary Green Power case

16 **Q. What is the purpose of your direct testimony?**

17 **A.** The purpose of my direct testimony is to provide useful input on:

- 18 • How to improve DTEE’s proposed commercial time-of-use (TOU) rate schedules
- 19 • How to expand and improve DTEE’s demand response (DR) program

- 1 • Why the Commission should reject DTEE’s proposal to recover certain outage
- 2 credit costs
- 3 • How to improve DTEE’s future battery deployments.
- 4 • How the Commission should respond to DTEE’s proposal on the recovery of
- 5 outage credits.

6 **Q. Are you sponsoring any exhibits?**

7 A. Yes:

8 Exhibit GLREA-1 (JR-1) Resume of John Richter

9 **Q. Were these exhibits prepared by you or under your supervision?**

10 A. Yes.

11 **III. PROFITS, CAPITAL INVESTMENT, AND PEAK LOAD**

12 **Q. What is the purpose of a for-profit corporation?**

13 A. According to the Corporate Finance Institute, “For-profit entities form the majority of

14 corporations, and they are formed to generate revenues and provide a return to their

15 shareholders, according to their percentage of ownership in the corporation.”¹

16 **Q. Is DTE Electric Company (DTEE) a for-profit Corporation?**

17 A. Yes. DTEE is a wholly owned subsidiary of the non-regulated corporation DTE Energy

18 Company, which is the parent holding Company and lists its shares on public stock

¹ Corporate Finance Institute, “Corporation,” accessed at:
<https://corporatefinanceinstitute.com/resources/knowledge/finance/what-is-corporation-overview/> on 4/22/2022

1 markets.

2 **Q. What determines the profit of a regulated, State-chartered utility corporation?**

3 A. Regulated utilities earn a profit which is the product of their rate base multiplied by their
4 regulated rate of return.² To increase their profit, they must generally either expand their
5 rate base through capital investment, or convince their regulators to increase their rate of
6 return, or both. More recently (in Michigan), electric utilities have the opportunity to get
7 profit incentives for actions such as energy waste reduction (EWR), demand response
8 (DR), and signing Power Purchase Agreements (PPAs).

9 **Q. How do regulated utilities justify expanding their rate base?**

10 A. There are numerous avenues, including asserting that investment will improve reliability,
11 that pilot programs are needed to learn about new technologies, that new investment will
12 reduce environmental impacts, or that increased demand (across the system or in certain
13 geographic areas) requires additional capacity. Additional regulator-approved capital
14 investment increases utility profits, regardless of the cause of the investment or the
15 justification(s) used. One industry veteran summarized this as: “Utilities usually respond to
16 load growth, clean energy mandates, or calls to increase resilience by building more
17 infrastructure, adding to their rate bases, and then recovering those costs through higher
18 customer rates.”³

² Jim Clarkson, “Public Utility Ratemaking 101 (the problems of rate base, cost passthrough),” *Master Resource*, March 24, 2016, available at: <https://www.masterresource.org/public-utility-regulation/public-utility-ratemaking-101/> accessed on 4/22/2022

³ William Driscoll, “Sunrun says better policy is needed to add “vast” amounts of distributed solar and storage,” *PV Magazine*, April 20, 2022, available at: <https://pv-magazine->

1 **Q. How does peak demand drive electric utility capital investment?**

2 A. Utility generation is sized to meet peak system-wide demand, with a reserve margin.
3 Increased system-wide peak demand increases the utility's opportunity to expand the rate
4 base by increasing generating capacity. Decreasing system-wide demand may not reduce
5 the Company's generating capacity or generation-related capital expenses for some time,
6 because generating facilities have long design lives and long capital depreciation
7 schedules. But decreasing system-wide demand removes the need to add new generation
8 to meet demand beyond facility retirements.

9 Shared distribution assets (such as substations) are sized to meet the aggregate peak
10 demand of the customers using each asset. Anything that reduces the local peak demand
11 on distribution asset reduces the utility's opportunity to expand the rate base by
12 increasing the capacity of that distribution asset.

13 In the words of esteemed utility regulation expert and author Professor Bonbright:

14 "While significant peaking problems exist in all public utilities, the most
15 important peaking problem for most electric companies is the recurring
16 cycle of summer peak demand. *The generation, transmission, and*
17 *distribution systems have been built to serve peak demand.*"⁴ (emphasis
18 added)

19 Given the above, it is very much in the interest of regulated electric utilities to drive up
20 peak demand, and against their interest to reduce it.

[usa.com/2022/04/20/sunrun-says-better-policy-is-needed-to-add-vast-amounts-of-distributed-solar-and-storage/](https://www.sunrun.com/2022/04/20/sunrun-says-better-policy-is-needed-to-add-vast-amounts-of-distributed-solar-and-storage/) accessed on 4/22/2022

⁴ James C. Bonbright, Albert L. Danielsen, David R. Kamerschen, "Principles of Public Utility Rates," 2nd edition, (Arlington Virginia): *Public Utility Reports Inc*, 1988, p 475

1 **Q. Why is the demand response program benefit of reducing peak load on the**
2 **distribution system important?**

3 A. Because peak load is driving DTEE to make major investments in the distribution system.
4 In the instant case, “The Company is requesting recovery of \$521.4M of 2024 capital
5 investment and \$711.6M of 2025 capital investment related to Distribution Operations
6 strategic investment that the Company plans to put into service during those years.” [2024-
7 2028].⁵ Not all of that is related to providing capacity, but a large part of it is, “The
8 capacity driven requested recovery is approximately 18% for 2024 and 30% for 2025.”⁶
9 Those two facts suggest that $(18\% \times \$521.4\text{M} + 30\% \times \$711.6\text{M}) = \mathbf{\$307\text{M}}$ of the capital
10 requested for the distribution system in the case is driven by peak demand. This amount,
11 with similar sums to be repeated in annual rate cases, add up to the potential value of a
12 larger, more effective demand response program, especially if geo-targeted.

13 **Q. How does peak demand affect customer interests?**

14 A. Customers want low rates. The recovery of capital investment to meet peak demand plus
15 the profit on that capital investment, increases rates. Whether they’re aware of it or not,
16 customers should desire low peak demand, both system-wide and locally in the
17 distribution system. The customer’s interests and the Company’s incentives are at odds
18 with one another.

⁵ GLREADE-3.36a

⁶ GLREADE-3.36b

1 **Q. What does this mismatch of customer and utility interests mean for the MPSC?**

2 A. The Commission should not expect any regulated electric utility to voluntarily initiate
3 actions that will have the effect of reducing their peak demand. Therefore, in the interest
4 of affordability, the Commission should push and even force regulated electric utilities to
5 reduce peak demand.

6 **Q. How has the Commission pushed DTE to reduce peak demand and hence capital**
7 **costs?**

8 A. The Commission's directive in its order of August 20, 2020 stated that "the Commission
9 expects to be presented with "a robust suite of NWAs that may be evaluated for prudence
10 as possible programs."⁷ It appears that the collection of NWA pilots DTEE proposes in
11 the instant case, and the details provided on the pilots proposed implementation in
12 Exhibit A-12, schedule B-5, are a direct result of that order.⁸ Implementation of those and
13 similar programs will be critical.

⁷ U-20147, Commission order dated August 20, 2020, page 44, citing its order of May 8, 2020, in the same case.

⁸ Direct testimony of S. M. Hartwick, SHH-51

1 **Q. What else has the Commission done to reduce DTEE's peak load, and hence capital**
 2 **costs?**

3 A. While Time-of-Use (TOU) rates may or may not be *intended* to reduce peak usage, and
 4 hence capital costs, they have that affect, as I will describe later in my testimony. The
 5 Commission directed DTEE to file a commercial TOU rate in its December, 2023 order
 6 stating: "For its next general rate case, DTE Electric Company shall develop and present
 7 optional time-of-use rates for its commercial secondary and primary customers."⁹

8 DTEE responded to that directive in the instant case, proposing the D3.11 rate for
 9 commercial customers taking service at secondary voltage, and the D14 rate for
 10 commercial customers taking service at primary voltage.¹⁰

11 **Q. What has the Commission do tone reduce DTEE's peak load, and hence capital costs**
 12 **in earlier cases?**

13 A. In April of 2018, the Commission ordered DTEE to propose a residential rate that
 14 eliminated the inverted block design and include on-peak summer rates in its next case.¹¹

15 In May of 2019, the Commission approved DTEE's proposal to conduct multiple
 16 residential TOU pilots, stating "In DTE Electric's next case filing, the Commission expects
 17 a comprehensive plan that offers a sound method for piloting the rate structure discussed
 18 herein..."¹² In November, 2022, the Commission directed DTE to implement a TOU rate,

⁹ U-21297, Order dated December 1, 2023, page 372

¹⁰ Direct testimony of A. Willis, pg. AW-4.

¹¹ U-18255, Commission order of April 18, 2018, page 82

¹² U-20162, Order dated May 2, 2019, page 165

and that it “shall use the mandatory enrollment strategy”, establishing a TOU rate as the standard residential rate.¹³

It took a long process of repeated Commission prodding to get DTEE to adopt a standard residential TOU rate.

In the words of the Collaborative Utility Solutions:

“Heavily regulated industries rely on policy direction/innovation, not industry innovation. Nothing is going to change without regulatory vision to require the change.”¹⁴

There is still a long way to go in implementing policies that will reduce peak electric utility load.

IV. TOU RATES AND PEAK LOAD REDUCTION

Q. Why should TOU rates be broadly implemented?

A. There are several reasons:

1. To comply with Federal law. PURPA, as amended by EPACT 2005 states:

“(a) IN GENERAL.—Section 111(d) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2621(d)) is amended by adding at the end the following: “(14) TIME-BASED METERING AND COMMUNICATIONS.—(A) Not later than 18 months after the date of enactment of this paragraph, each electric utility shall offer each of its customer classes, and provide individual customers upon customer request, a time-based rate schedule under which the rate charged by the

¹³ U-20386, Commission order dated November 18, 2022, page 401

¹⁴ Chris Hickman, “Empowering Energy Transition,” February 22, 2024, slide 6, MPSC: Demand Response Aggregation. Accessed on 07/15/2024 at: <https://www.michigan.gov/mpsc/-/media/Project/Websites/mpsc/workgroups/DR-DER-Aggregation/DR-DER-Aggregation-CUS-Presentation-2-22-24.pdf?rev=e5e9dd35cf99499896021c10b1b5e293&hash=E7F43CFA1D29132C622BC5397FB2C720>

1 **Q. Did the implementation of the TOU rate D1.11 as the standard residential rate**
2 **provide accurate price signals about the cost of electricity service in different seasons**
3 **and hours of the day?**

4 A. D1.11 certainly reflects the cost-of-service *more* accurately than the non-time-varying D1
5 rate it replaced. But as I testified at length in U-20386, it fails to recover all capacity costs
6 from usage during the peak rate period.¹⁶

7 **Q. Why should capacity costs be recovered entirely from peak usage periods, when some**
8 **capacity is necessary at all times of day?**

9 A. While some capacity is necessary during other periods of time, this is already reflected
10 with the 4CP 75-0-25 method of cost allocation for production plant-related costs. This
11 allocates 25% of the cost of generation plants on the basis of energy consumption. The
12 other 75% of the cost of generation plants is, properly, allocated to capacity. This
13 computed capacity cost should be recovered from capacity charges imposed during peak
14 time periods.

¹⁶ U-20386 8 V 3233 - 3240

1 **Q. But why should the 75% of plant costs allocated on the basis of 4CP contribution as a**
 2 **capacity be recovered only during peak usage periods?**

3 A. To accurately reflect the cost-causation of peak usage. The charge for capacity reflects the
 4 cost of ensuring there is sufficient generation and transmission available to meet that peak
 5 load. Therefore, it would be accurate to assign the entire cost of capacity to the peak
 6 demand time period. Professor Bonbright discussed capacity costs and their recovery his
 7 seminal book on utility regulation:

8 “The last margin of capacity is used only at peak, and so the total costs of
 9 installing, depreciating, and maintain it year-round are focused on just a
 10 few units of use. This cost properly falls on peak-load use, which is
 11 responsible for requiring the capacity... *At off-peak times, fixed (capacity)*
 12 *costs are zero.*”¹⁷ (emphasis added)

13 And Professor Bonbright recommends a recovery method:

14 “Time of use tariffs are efficient because they are put on cost causers.
 15 While it is true that large power users can and will alter their loads in
 16 response to time of use tariffs, this is irrelevant to the cost-tracking
 17 purpose of the tariffs. Economic efficiency simply dictates that consumers
 18 should be faced with prices reflecting the true costs they impose on society
 19 regardless of how they choose to react to these tariffs.”¹⁸

20 For avoidance of doubt, Professor Bonbright states that non-peak rates should be based
 21 solely on operating costs:

22 “The generation, transmission, and distribution systems have been built to
 23 serve peak demand. During off-peak periods much of this capacity is
 24 idle... Off-peak demand usage usually does not press against the system
 25 capacity, *so only the operating costs need be considered.*”¹⁹ (emphasis
 26 added)

¹⁷ James C. Bonbright, Albert L. Danielsen, David R. Kamerschen, “Principles of Public Utility Rates,” 2nd edition, (Arlington Virginia): *Public Utility Reports Inc*, 1988, p 459

¹⁸ Ibid, p 475-6

¹⁹ Ibid, p 475

1 **Q. Did you make similar arguments when the D1.11 residential TOU rate was proposed?**

2 A. Yes, I did. But the Commission approved a rate structure with capacity charges during
3 both peak and off-peak periods.

4 **Q. Do the proposed commercial TOU rates (C3.11 and D14) implement a cost recovery
5 approach that is similar to the structure approved for the residential D1.11 rate?**

6 A. Yes, DTEE reports that “Thus, the rate utilizes the same overall billing determinants, cost
7 allocations, and underlying revenue requirements as D3 in this case, similar to the initial
8 D1.11 proposal in Case No. U-20836.”²⁰

9 **Q. Why should the proposed commercial TOU rates (C3.11 and D14) implement a cost
10 recovery approach that was not approved for the residential D1.11 rate?**

11 A. Because D1.11 featured mandatory enrollment, while the proposed C3.11 and D14
12 commercial TOU rates are purely optional, at the discretion of the customer. In an earlier
13 case, DTEE argued that Staff’s proposal for a D1 rate redesign was “too radical, and the
14 Commission should address this issue more incrementally.”²¹

15 The Commission suggested interest in a different TOU structure in the future:

16 “While the Commission appreciates the Staff’s rate design proposal to
17 better align rates to reflect how capacity costs are incurred (primarily to
18 cover the summer peak), this is not the proceeding to modify rate design
19 given the complexity of other issues. This issue could be revisited, as
20 appropriate, in a future rate case.”²²

²⁰ Direct testimony of A. Willis, pg. AW-31

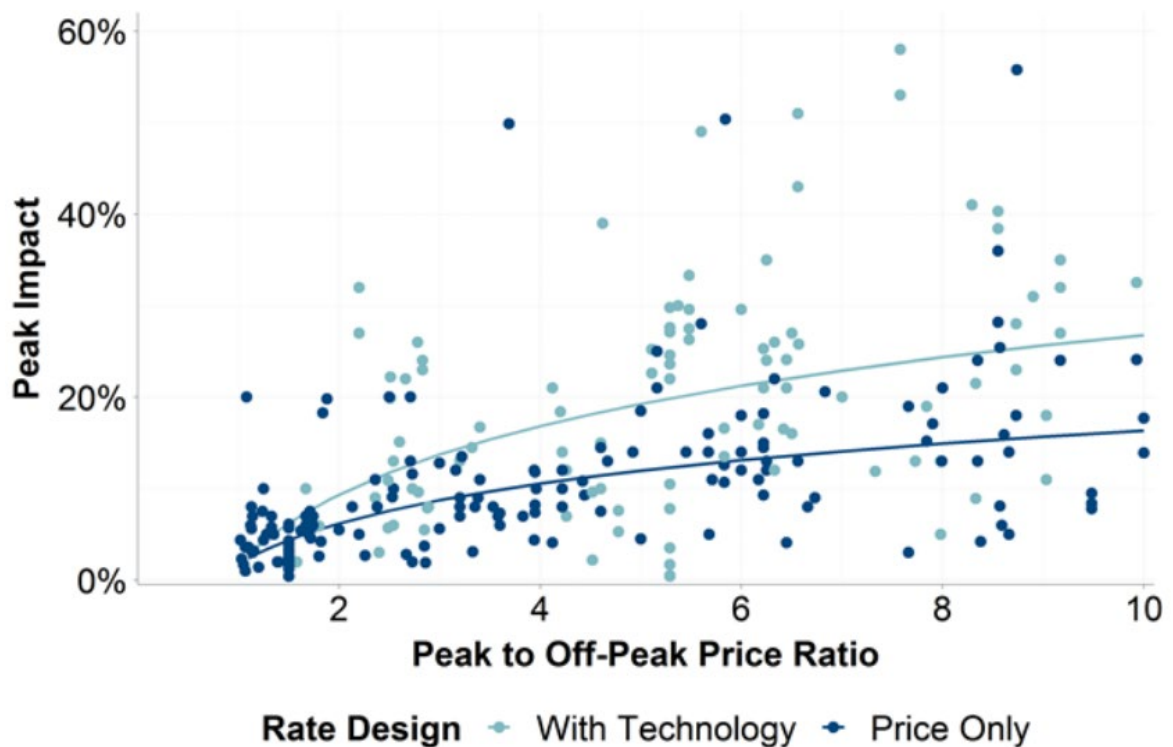
²¹ U-18255, Order dated April 18, 2018, page 81

²² U-18248, Order dated November 21, 2017, page 70

This is the “appropriate future rate case.” Incremental changes are not necessary in an optional, pilot rate schedule. To the contrary, an optional, pilot rate is exactly the right place to try a bold test of a rate design that recovers capacity costs accurately.

Q. Is there any reason to believe that such a rate design, if widely adopted, would reduce peak load?

A. Absolutely. A study by the Brattle Group based on nearly 400 TOU pilots around the globe found a clear relationship between the peak to off-peak price ratio, and the percentage decline in peak load, illustrated by this graph:²³



²³ Ahmad Faruqui, “Electricity Ratemaking and Equitable Rate Design, A Survey of Best Practices,” June 2, 2021, slide 9. Accessed on 5/11/2021 at: <https://www.brattle.com/wp-content/uploads/2021/08/Electricity-Ratemaking-and-Equitable-Rate-Design-A-Survey-of-Best-Practices.pdf>

1 The lower, darker line on the graph represents TOU pricing pilots that changed only
2 pricing. It is clear that in other places, TOU rates with higher peak to off-peak price ratios
3 reduce peak load more than TOU rates with lower peak to off-peak price ratios.

4 **Q. What should the Commission order regarding the proposed C3.11 and D14**
5 **commercial TOU rates?**

6 A. The Commission should direct the Company to redesign both commercial pilot rates to
7 recover the same amount of funds from energy-capacity rates, but recover all of it during
8 the peak rate time periods. The Commission should direct the Company to file the adjusted
9 rate schedules, within 60 days of the order in the instant case, for ex parte approval. The
10 Commission should also direct the Company to include in its next rate case, a discussion of
11 the pros and cons of making a TOU rate structure the default, standard rate structure for all
12 secondary voltage commercial customers, and to collect metrics of success on the pilots to
13 prepare for making them the default standard rate.

14 **Q. Other than well-designed TOU rates, what other programs can reduce peak load, and**
15 **hence capital costs?**

16 A. Demand response (DR) programs are designed to do exactly that.

V. DEMAND RESPONSE FOR PEAK LOAD REDUCTION

A. CAPACITY ADEQUACY

Q. Why would you discuss capacity adequacy in a rate case? Isn't capacity adequacy what Integrated Resource Plan (IRP) cases are for?

A. Yes, capacity adequacy is central to IRP cases. But I will discuss the deficiencies of DTEE's Demand Response (DR) programs later in my testimony, and it is important to understand why DR is so critically important at this time.

Q. Has the North American Electric Reliability Council (NERC) expressed concerns recently about the reliability of generation facilities?

A. Yes. In their 2024 "State of Reliability" report released in June of this year, NERC reported concern about the high "weighted equivalent forced-outage rates" (WEFOR) for both coal and cycled natural gas units. The overall WEFOR for 2023 was 7.8%, vs. the 5-year average of 7.4%.²⁴ It expressed concerns that coal units are becoming less reliable due to reduced maintenance and abnormal cycling.²⁵

Q. Has MISO recently expressed concerns resource adequacy?

A. Yes, In February of this year, MISO released its Reliability Imperative report. The report warned that "there are immediate and serious challenges to the reliability of our region's electric grid..." It cited the transition to non-dispatchable wind and solar sources, increasing extreme weather events, supply chain and permitting issues, large sign-site load

²⁴ NERC, "2024 State of Reliability," June 2024, page 58, Accessed on 7/8/2024 at: https://www.nerc.com/pa/RAPA/PA/Performance%20Analysis%20DL/NERC_SOR_2024_Technical_Assessment.pdf

²⁵ *ibid*, page 59

additions, and electrification as key risks.²⁶

Also, the annual OMS-MISO survey (released in June of this year) expressed concerns about near-term resource adequacy. The survey considered a variety of variables and scenarios and projected anything from a “potential surplus of 1.1 GW to a deficit of 2.7 GW for the summer of PY2025/26, depending on critical, yet uncertain, drivers...” and stated that “Resource Adequacy risks could grow over time across all seasons, absent increased new capacity additions and actions to delay capacity retirements.”²⁷

Q. Has MISO expressed concerns that their capacity accreditation methods may understate load shedding risk?

A. Yes. In its most recent OMS-MISO Survey Results presentation, MISO reported:

“MISO’s existing accreditation methods can overstate a resource’s capacity value during the highest risk periods, especially as the region’s risk profile changes, leading to understated risk.”²⁸

Q. Have you recently provided testimony to the MPSC that MISO’s capacity adequacy methods overstated capacity during critical times?

A. Yes. In DTE Energy’s last IRP,²⁹ I provided the following testimony:

“Q. Energy production from wind and solar is variable, depending on the weather. Do dispatchable thermal plants provide assured supply when

²⁶ MISO, “MISO’s Response to the Reliability Imperative,” November 2024, Executive Summary, page 1. Accessed on 7/8/2024 at: <https://cdn.misoenergy.org/Executive%20Summary%202024%20Reliability%20Imperative%20Report%20Feb.%2021%20Final631825.pdf?v=20240221114214>

²⁷ MISO, “2024 OMS-MISO Survey Results,” June 20, 2024, slide 2. Accessed on 7/8/2024 at: <https://cdn.misoenergy.org/20240620%20OMS%20MISO%20Survey%20Results%20Workshop%20Presentation635585.pdf>

²⁸ *ibid*, slide 15

²⁹ U-21193, 7V 2298 - 2300

1 needed?

2 A. Often, but not always. The rules of MISO capacity accreditation
3 assume that outages of thermal plants are rare, and completely
4 independent of one another. In practice, this has not proven to be an
5 accurate assumption; several major outages have been caused by
6 numerous thermal plants failing simultaneously for related reasons. For
7 example:

8 1. This past Christmas Eve, ISO-NE declared a “capacity deficiency.”
9 Certain, undisclosed power plants were fined \$39M for their failure to
10 perform.³⁰

11 2. During that same storm, the PJM region also suffered capacity-
12 related outages. PJM believed they had almost 29 GW of reserve
13 capacity, but more than 23% of generating capacity in PJM was
14 unavailable, and 92% of outages were reported on less than an hour’s
15 notice, or with no notice at all.³¹ An astonishing 46 GW of power
16 plants were out of service. All were powered by fossil fuels, mostly
17 natural gas. PJM announced penalties that may reach \$2B.³²

18 3. Also, last December, coal and natural gas power plant outages
19 caused blackouts in North Carolina and Tennessee.³³

20 4. In 2021 in Texas, unusually cold weather resulted in a massive
21 power outage. It should be noted that “the 2021 storm did not set
22 records for the lowest recorded temperatures in many parts of the
23 state...”³⁴ Significantly, “all types of generation technologies failed”,
24 including gas-fired, coal-fired, nuclear reactors and solar facilities that
25 failed to operate at expected output levels.³⁵ Power cut-offs to natural
26 gas facilities resulted in less gas available for power generation – a

³⁰ David Sharp, “New England ISO levies \$39M in fines to power plants for coming up short in December,” *Power Grid International*, January 10, 2023. Accessed at: <https://www.power-grid.com/policy-regulation/new-england-iso-levies-39m-in-fines-to-power-plants-for-coming-up-short-in-december/> on 3/4/2023.

³¹ Clarion Energy Content Directors, “PJM describes widespread generation failures during December cold wave,” *Power Engineering*, January 12, 2023. Accessed at <https://www.power-eng.com/nuclear/pjm-describes-widespread-generation-failures-during-december-cold-wave/> on 3/5/2023.

³² Utility Dive, “Winter storm Elliott proved fossil fuel plants are an infirm resource,” January 30, 2023. Accessed at: <https://www.utilitydive.com/spons/winter-storm-elliott-proved-fossil-fuel-plants-are-an-infirm-resource/641320/> on 3/4/2023.

³³ Ibid.

³⁴ University of Texas, at Austin Energy Institute, “The Timeline and Events of the February 2021 Texas Electric Grid Blackouts,” July 2021, p 7. Accessed at: <https://energy.utexas.edu/research/ercot-blackout-2021> on 3/5/2023.

³⁵ Ibid, p 8.

domino effect.³⁶ This co-dependence of gas on electricity and electricity on gas was highly problematic, and it wasn't the first time this happened in Texas.

5. In 2011 in Texas, unusually cold weather resulted in 3.2M ERCOT customers losing power. Prior to the event, ERCOT had "3100 MW of responsive reserves available on the first day of the event, compared to a minimum requirement of 2300 MW." But over two days, 193 ERCOT generating units failed or were derated, for a total loss of 29,720 MW.³⁷ In addition to freezing generating equipment and water lines, natural gas production also fell off due to frozen equipment.³⁸ Rolling blackouts also caused a quarter of the decline in natural gas production.³⁹ So again, there was a domino effect. Failures of various systems were not independent, they were all related to the same weather, or to other weather-related failures.

My point is that "dispatchable" is not synonymous with "reliable." Current methods of accrediting capacity to thermal power plants fails to reflect very real cases in which a single stress causes *simultaneous* failures in multiple plants. The current capacity accreditation process for thermal plants is somewhat flawed, and cannot be rectified with a marginally larger amount of reserve capacity."

Q. Have storms caused thermal plant outages in Michigan recently?

A. Yes, in December of 2022, as a result of winter storm Elliot. NERC's final report summarized it this way:

During the Event, 1,702 individual BES [Bulk Electric System] generating units in the Eastern Interconnection experienced 3,565 unplanned outages, derates, or failures to start. Each individual unit could, and often did, have multiple outages from the same or different causes. At the worst point of the Event, there were 90,500 MW of coincident unplanned generating unit

³⁶ Mani Cai, Erin Douglas, and Mitchell Ferman, "How Texas' power grid failed in 2021 — and who's responsible for preventing a repeat," *The Texas Tribune*, February 15, 2022. Accessed at: <https://www.texastribune.org/2022/02/15/texas-power-grid-winter-storm-2021/> on 3/5/2023.

³⁷ FERC, "Report on Outages and Curtailments During the Southwest Cold Weather Event of February 1-5, 2011, Causes and Recommendations," August 2011, p7. Accessed at: <https://www.ferc.gov/sites/default/files/2020-04/08-16-11-report.pdf> on 3/4/2023.

³⁸ Ibid, p 9.

³⁹ Ibid, p 11.

1 outages, derates and failures to start (meaning they all occurred at the
2 same time). Including generation that was already out of service, a total of
3 over 127,000 MW of generation was unavailable, representing 18 percent
4 of the U.S. portion of the anticipated resources in the Eastern
5 Interconnection.

6 The Event was the fifth in the past 11 years in which unplanned cold
7 weather-related generation outages jeopardized grid reliability. Several
8 Balancing Authorities (BAs) (grid operators that balance demand and
9 electric energy) in the southeast U.S. needed to shed firm load during the
10 Event to maintain system reliability...”⁴⁰

⁴⁰ FERC / NERC, “Inquiry into Bulk-Power System Operations During December 2022 Winter Storm Elliott,” October 2023, pg. 5-6. Accessed on 7/21/2024 at: <https://www.ferc.gov/news-events/news/ferc-nerc-release-final-report-lessons-winter-storm-elliott>

The NERC report included a map showing generator outages, and it is plain to see that Michigan electric generation including wind, coal, and gas-fired plants, all had problems during the storm:⁴¹

Figure 2: Location and Fuel Type of Unplanned Generation Outages and Derates During the Event (Bubble Size by MW for each Outage), as of December 24, 2022



Q. Has any DTEE witness suggested that the realistic capacity of DTEE generation may be less than the MISO capacity adequacy methods assign?

A. Yes, DTEE hired a consulting company named Astrapé to perform capacity determinations. The consultant's report contained a footnote which stated:

“The UCAP accreditation of the retired resources (Monroe) overestimates its reliability contribution relative to its ELCC value due to the large size of the individual units (approximately 750MW each). Large resources have disproportionate impacts on LOLE.”⁴²

⁴¹ Ibid, pg. 8

⁴² U-21193, 7 V 2302, citing a DTEE exhibit

1 **Q. Has DTE Energy suggested that load reduction through Demand Response (DR) may**
2 **become necessary more often in the future?**

3 A. Yes, in the instant case, Company witness Sharma testified:

4 “Under circumstances where available generation is unable to meet load
5 demand, the Company will communicate the need to customers under
6 Interruptible Agreements that their load must be reduced.... Due to lower
7 energy reserves in the market, *the potential for the frequency of these*
8 *event has increased.*”⁴³ (emphasis added)

9 **Q. Can’t DTEE just build more generation capacity to address any capacity adequacy**
10 **issues?**

11 A. Yes, to a degree. But there are at least two limitations to that approach:

12 1. DTEE and other utilities across the country are experiencing difficulties trying to bring
13 new wind and solar generation facilities online on schedule (see below).

14 2. Due to the drive to decarbonize, new generation facilities are mostly wind and solar.

15 These facilities are weather-dependent and, within each technology, highly correlated

16 in their output. A low-wind weather pattern may cover much of the State at one time,

17 reducing the output of wind turbines across a broad area. A cloudy weather pattern may

18 cover much of the State at one time, reducing the output of solar farms across a broad

19 area.

20 **Q. Has DTE Energy expressed concerns about their ability to bring new generation**
21 **facilities online on schedule?**

22 A. Yes. In August of 2022, DTE Energy’s Director of Renewable Energy testified:

⁴³ Direct testimony of P. Sharma, PS-74 & PS-75, lines 18-20 and 2-3, respectively

1 “The Company is currently experiencing delays with both the White Tail
2 Solar Project (120 MW) and the Freshwater Solar Project (200 MW), and is
3 undergoing confidential discussions with the developer, so an expected
4 Commercial Operation Date (COD) is not known at this time.”⁴⁴

5 In November of 2022, A member of DTEE’s Renewable Energy Strategy Team testified
6 on multiple issues with bringing planned generation facilities online on-time:

7 “The MISO generation interconnection (GI) process was targeted to take around 500
8 days under the tariff but has experienced delays, with recent projects taking over
9 900 days to complete from start to finish. The extended process with the additional
10 risk of delays limits the ability of projects to become commercially operational by
11 the date they are needed.”⁴⁵
12

13 and also,

14 “As Witness Leslie discusses in her testimony, the solar photovoltaic industry has
15 recently faced disruptions on a global scale with supply chain constraints and
16 international trade actions affecting the availability of solar panel modules being
17 imported into the US. These developments have delayed some solar projects as
18 reported by the US Energy Information Administration and other sources and
19 created uncertainty for utilities and developers related to the pricing and availability
20 of solar panels.”⁴⁶
21

22 Growing interconnect queues are a national problem; a Berkeley Lab study shows 2,600

23 GW of capacity in the transmission interconnect queues, up 30% during 2023.⁴⁷

⁴⁴ U-21172, Direct Testimony of K. W. Cameron, 2 V 36, lines 6-10

⁴⁵ U-21193, Direct Testimony of V. M. Hernandez, 5 V 1050, lines 12-16

⁴⁶ *ibid*, 5V 1054, lines 4 - 10

⁴⁷ Sean Wolfe, “U.S. interconnection queues, already jammed, grew 30% in 2023,” *Power Grid International*, April 10, 2024. Accessed on 7/9/2024 at: <https://www.power-grid.com/renewable-energy/u-s-interconnection-queues-already-jammed-grew-30-in-2023/>

1 **Q. Couldn't DTEE build a new nuclear plant to fill the gap?**

2 A. Building a new nuclear power plant would certainly take many years, failing to fill the
 3 immediate potential capacity gap. The most recently built nuclear power plant in the U.S.,
 4 Geogia's Vogtle, started construction in 2009, and finished this year.⁴⁸
 5 Additionally, while nuclear power is "firm power,"⁴⁹ it is not, in a practical sense,
 6 dispatchable. While it is technically possible to vary the output of a nuclear power plant,
 7 for economic reasons and the challenges of the refueling cycle, nuclear power plants are
 8 nearly always operated at full capacity. This functionally fixed-output generation source
 9 does not effectively fill the gaps in load/supply balance as demand varies and the output of
 10 solar and wind facilities varies over time.

11 **Q. What zero-carbon alternatives could be implemented quickly?**

12 A. There are two that come to mind: Demand Response (DR), and energy storage. Both are
 13 zero emission, and both can be ramped up rapidly to bring supply and demand in balance. I
 14 will discuss each in turn.

⁴⁸ Gautama Mehta, "Georgia's Vogtle plant could herald the beginning — or end — of a new nuclear era," *GPB news*, April 9, 2024. Accessed on 7/9/2024 at:
<https://www.gpb.org/news/2024/04/09/georgias-vogtle-plant-could-herald-the-beginning-or-end-of-new-nuclear-era>

⁴⁹ Defined by the U.S. EIA as "Power or power-producing capacity, intended to be available at all times during the period covered by a guaranteed commitment to deliver, even under adverse conditions." *US. EIA*, "Glossary". Accessed on 7/10/2024 at:
<https://www.eia.gov/tools/glossary/?id=electricity>

B. DEMAND RESPONSE BENEFITS

Q. What is Demand Response (DR)?

A. Demand Response is a very old idea. Any program which incents customers to reduce their energy usage during periods of peak demand, including pricing programs (e.g., time-of-use, critical peak pricing, or critical peak rebates) may be considered demand response.⁵⁰ A DR program may reduce the customer's total energy consumption, but more often it shifts their energy consumption from a high demand time period to another time period.

Q. What is the relationship between DR and “non-wires alternatives” (NWA)?

A. The MPSC has defined non-wires alternatives as:

“An electricity grid investment or project that uses distribution solutions such as distributed energy resources (DER), energy waste reduction (EWR), demand response (DR), and grid software and controls, to defer or replace the need for distribution system upgrades.”⁵¹

NWA is a broader concept, that includes DR, but also other kinds of grid investment. Note that the MPSC definition specifically states that NWA defers or replaces the need for *distribution system* upgrades.

Q. What is a Virtual Power Plant (VPP), and how is that related to demand response?

A. According to the U.S. DOE, VPPs are:

“...generally considered a connected aggregation of distributed energy resource (DER) technologies, offer deeper integration of renewables and demand flexibility, which in turn offers more Americans cleaner and more

⁵⁰ U.S. DOE Office of Electricity, “Demand Response.” Accessed on 7/9/2024 at: <https://www.energy.gov/oe/demand-response>

⁵¹ U-20147, Order dated August 20, 2020, page 11

affordable power.”⁵²

VPPs extend the traditional concept of demand response in two ways:

1. The aggregation of DER is often done by a third party, though it may be done by the electric utility.
2. The DERs being aggregated may include generation and/or batteries, which can inject energy into the grid, rather than just reduce the load on the grid.

Q. What kind of DER technologies can participate in a VPP?

A. According to Jigar Shaw, of the DOE,

“A VPP is generally considered a connected aggregation of DER technologies – not only solar and battery storage, but increasingly grid-interactive efficient appliances and buildings, electric vehicle charging, and thermal energy storage. Aggregators, utilities, or grid operators, under terms agreed upon with participants, can remotely and automatically adjust DERs in this aggregation to provide clean energy, reliability, and grid services while maintaining customer comfort and productivity. Through a combination of software and hardware, VPPs not only open the grid to a whole new utility-scale, behind-the-meter supply, but also coordinate disparate DERs into holistic, demand-flexible resources. Operators gain the flexibility to better reduce peak demand and, as a result, defer investment in additional capacity and infrastructure to serve a peak load that is expected to increase as we electrify the nation’s economy.”⁵³

Q. What advantages do VPPs offer?

A. According to Jigar Shaw, of the DOE,

⁵² U.S. DOE Loan Programs Office, “Virtual Power Plants.” Accessed on 7/9/2024 at: <https://www.energy.gov/lpo/virtual-power-plants>

⁵³ Jigar Shaw, “Introducing VPPieces: bite-sized blogs about Virtual Power Plants”, *U.S. DOE*,

“DERs can provide energy at a lower price than what the grid typically offers. They do so more cleanly while offering consumers greater resilience during adverse grid events. And despite commercial lenders’ unwillingness to adequately recognize it, DERs are also more widely available and cost-effective than ever. As researchers at Lawrence Berkeley National Laboratory have shown, solar adopters can come from a range of incomes, and financing options are gradually expanding to lower income groups, as well as to those with below-median home values and credit scores.”⁵⁴

and also:

“Energy end-use is at least somewhat predictable because most people follow daily patterns: washers, dryers, ovens, HVAC, and other usual suspects come to life around the same times each day, often in the evening. These daily peaks, as well as seasonal peaks, are when electricity is most expensive, hence when demand flexibility can save consumers the most money... Additionally, *the costs of building new transmission and distribution infrastructure* are borne by ratepayers. This spend is increasing as a portion of the average U.S. electricity bill as utilities overbuild this infrastructure to handle peak loads – meaning that the average utilization of the grid is going down every year. Utility spending for electricity delivery increased 65% over the past decade and now represents nearly half of the all-in costs of electricity supply. VPPs, and DERs in general, can further drive savings by deferring further investment in system infrastructure by spreading out electricity demand that will only increase as we electrify the nation’s economy.”⁵⁵ (emphasis added)

Reducing peak demand not only reduces or defers the need for new generation, but also for distribution grid capacity upgrades. As I discussed earlier in this testimony, DTEE is proposing to spend ~\$307M of capital on capacity related distribution upgrades, in the instant case alone.

Loan Programs Office, May 12, 2022. Accessed on 7/9/2024 at:

<https://www.energy.gov/lpo/articles/introducing-vppieces-bite-sized-blogs-about-virtual-power-plants/>

⁵⁴ Ibid

⁵⁵ Jigar Shaw, “VPPiece #2: Benefits to Affordability,” *DOE Loan Programs Office*, June 9, 2022. Accessed on 7/9/2024 at: <https://www.energy.gov/lpo/articles/vppiece-2-benefits-affordability>

1 **Q. Can VPPs provide peak capacity quickly?**

2 A. Yes! Here are two examples:⁵⁶

3 1. The Ontario Independent Electricity System Operator's Save on Energy Peak Perks
4 program enrolled 100,000 homes within six months in 2023, reducing peak summer
5 demand by up to 90 MW.

6 2. The California Public Utility Commission's Demand Side Grid Support VPP launched
7 in 2022, and achieved 142 MW of committed capacity within a year.

8 **Q. Does DTEE recognize that DR supports its transition to clean energy?**

9 A. Yes. DTEE states, "DR programs allow electric customers to play a role in the operation of
10 the electric grid and support the clean energy transition."⁵⁷

11 **Q. Does DTEE recognize that DR reduces both generation and distribution costs for**
12 **ratepayers?**

13 A. No such recognition is apparent in the Company's testimony in the instant case. DTEE
14 recognizes the generation / energy-cost benefit (extending even to wholesale prices), but
15 makes *no mention* of savings in the distribution system:

16 "Q15. What are the benefits of DR to the utility?"

17 A15. The reduction or shift in customer usage from DR programs can
18 provide value to the utility by reducing the need for additional *generation*,
19 resulting in lower energy costs and supporting the Company's generation

⁵⁶ Brian Martucci, "US VPPs can meet summer demand peaks faster, cheaper than new generation and transmission: RMI," *Utility Dive*, July 10, 2024. Accessed on 7/20/2024 at: <https://www.utilitydive.com/news/us-vpps-can-meet-summer-demand-peaks-faster-cheaper-than-new-generation-an/721024/>

⁵⁷ Direct testimony of K. O. Farrell, pg. KOF-5, lines 15-16

transformation. If DR programs are less costly than other capacity resources, the utility and all customers can benefit from displacing or deferring the need for new *generation resources*. In addition, reducing electricity usage when demand is the highest can result in lower wholesale energy prices.”⁵⁸ (emphasis added)

However, in discovery, DTEE seems to acknowledge that demand response is beneficial to the distribution system by reducing peak load:

“Question: 19. Regarding DTE Energy’s Demand Response (DR) program, as described on pages KOF-5 & 6:

b. Testimony discusses the benefit of DR by reducing the need for additional generation. Does the Company’s DR program provide any benefit to the Company by reducing load on the distribution system, during peak periods?

Answer: Yes, the Company’s DR programs are designed to be used as a capacity resource during peak periods.”⁵⁹

C. DTEE’S DR PROGRAM

Q. What kinds of offers make up DTEE’s DR program?

A. DTEE currently offers eleven DR tariffs and programs.⁶⁰ Ten of these involve directly reducing customers’ specific load during peak periods, such as air conditioners or water heaters, in return for a lower rate during other times, or some other financial reward. The eleventh, Dynamic Peak Pricing (DPP, AA D1.8), charges customers a much higher rate during declared DR “events” - critical peak periods (CPPs) when the utility is struggling to meet demand.

⁵⁸ Ibid, pages KOF-5 and KOF-6, lines 23-25 and 1-4, respectively

⁵⁹ GLREADE-2.19b

⁶⁰ Direct testimony of K. O. Farrell, pg. KOF-8

1 **Q. Given the resource adequacy challenges you’ve mentioned above, is DTEE planning a**
 2 **major expansion of these programs?**

3 A. DTEE’s words and projections seem to be at odds with each other. DTEE asserts that:

4 “The Company is committed to continued growth of the portfolio and
 5 prudent spending to assure the Company and its customers are receiving
 6 the maximum benefits of demand response.”⁶¹

7 However, they forecast that the portfolio will shrink from 786 MW in 2022 to 712 MW in
 8 2025/2026PY,⁶² a reduction of 9.4% ($786 \text{ MW} - 712 \text{ MW} / 786 \text{ MW} = .094$).

9 **Q. Why would DTEE cutback their DR programs now?**

10 A. They aren’t exactly cutting them back. They’re recognizing that they are not as large as
 11 they had computed in the past and are adjusting their capacity claim to more closely align
 12 with reality.⁶³ Additionally, as part of the 2022 IRP settlement, DTEE is issuing two 25
 13 MW DR-related competitive solicitations.⁶⁴ Given their asserted commitment, it’s unclear
 14 to me why they would not have initiated such programs on their own.

15 **Q. Has DTEE had problems with the execution of load curtailment in their DR**
 16 **programs?**

17 A. Yes. DTEE has issues with Radio Control Units (RCUs) and Load Control Devices
 18 (LCDs) used to interrupt customer equipment in their CoolCurrents program.

⁶¹ *ibid*, pg. KOF-44, lines 4-7

⁶² *ibid*, pg. KOF-43

⁶³ *ibid*, pg. KOF-43

⁶⁴ *ibid*, pg. KOF-42

1 **Q. What kind of problems?**

2 A. CoolCurrents interrupts air conditioning. It is dependent on either an old RCU (Radio
3 Control Unit) or newer LCD (Load Control Device) to interrupt the air conditioner. But for
4 a variety of reasons, many LCDs are not able to interrupt service when called to do so. The
5 Company also reports that RCUs are “prone to malfunctioning and difficult to service”⁶⁵,
6 and about 170,000 RCUs have been replaced with newer LCDs. But of the 170,000
7 replacement LCDs installed, “nearly 25,000” are “not available for interruption”. ⁶⁶

8 **Q. What does DTEE propose to do about LCDs that aren’t available for interruption?**

9 A. DTEE proposes to replace the 24-volt LCDs, which are apparently often disconnected
10 from the transformer that supplies them with power, with 240-volt LCDs, which will tie
11 directly into the power of the air conditioner.⁶⁷ In short, DTEE’s replacement device (the
12 24-volt LCD) hasn’t work well, so they’re replacing the replacements.

13 **Q. Have the customers with the failed RCUs and LCDs remained in the CoolCurrents**
14 **program and continued to benefit from lower rates?**

15 A. Yes, they have. A DR program is supposed to justify the cost of the incentive to the
16 customer by saving money, by reducing load. But providing the customer with the
17 incentive when the equipment is unable to reduce peak load causes a reduction in
18 Company revenue unmatched by any reduction in its costs. In fact, the failed units impose
19 an additional cost to replace the RCUs and LCDs. Worse yet, this policy creates a perverse

⁶⁵ *ibid*, KOF-16, lines 23 & 24

⁶⁶ *ibid*, KOF-16, lines 7 & 9

⁶⁷ *ibid*, KOF-27

incentive for customers to sabotage their LCDs, so that they can continue gain the benefits of being in the CoolCurrents program, without the discomfort of having their air conditioner turned off for hours at a time.

Q. How widespread is this problem of CoolCurrents LCDs failing?

A. The Company stated “nearly 25,000” replacements failed.⁶⁸ It’s unclear if there were non-replacement LCDs installed that also failed. But the Company provided one worrying anecdotal figure: on the Fisher sub-station there are 298 CoolCurrents customers whose LCDs are “online”, and an additional 201 CoolCurrents customers whose LCDs “are currently offline because they do not have the proper 24-volt power source connection.”⁶⁹. That’s a total of 499 CoolCurrents customers on the Fisher substation with LCDs, of which 201 of them are without power, for a failure rate of 40% (201/499=.40)!

In discovery regarding the above calculation, the Company acknowledged that this failure rate is not unique to the Fisher substation:

“Question... For this sample, 40% (201 offline of 201+299=500 total CoolCurrent customers) are offline. Does the Company believe that the offline rate for CoolCurrents customers in other parts of the Company’s network is roughly 40%?

Answer: Yes.”⁷⁰

A 40% failure rate in a large program like CoolCurrents represents a serious failure.

⁶⁸ *ibid*, KOF-16, line 7

⁶⁹ Direct testimony of S. M. Hartwick, pg SMH-60 & 61, lines 24-25 and line 1, respectively.

⁷⁰ GLREADE-3.43g

1 **Q. What is the DTEE Insight program?**

2 A. DTEE customers can download an app, which allows them to view their hourly usage from
3 the day before. Customers with the insight app can also get an Energy Bridge (EB), which
4 provides real-time data on the energy consumption of smart devices, and to turn them on
5 and off.

6 **Q. What is the purpose of the DTEE Insight program?**

7 A. The program “aims at driving customer behavior with the goals of reducing both overall
8 energy (gas and electricity) consumption and electricity demand at peak hours. If it
9 succeeded at that, it would be a DR program.

10 **Q. How much has the Insight program reduced, or changed the pattern of, customer**
11 **energy consumption?**

12 A. We don’t know, and neither does the Company. The Company’s filing in the instant case
13 offered no figures whatsoever. In discovery, the Company admitted that they have no data
14 to suggest that customers with the Insight program, with or without the bridge, have
15 “altered their energy consumption patterns in any beneficial way.”⁷¹

⁷¹ GLREADE-2.32f and GLREADE-2.32g

1 **Q. How does the Company justify asking for recovery of the program costs?**

2 A. The Company describes how participation in the program is growing, with a rapid increase
3 in the number of copies of the app downloaded, and 56,000 households with energy
4 bridges.⁷² The Company also declares their intent to make the program “an educational
5 tool”.⁷³

6 **D. CRITICAL PEAK REBATE PROGRAMS**

7 **Q. What other kinds of DR programs are being offered by electric utilities in other**
8 **jurisdictions?**

9 A. One common approach is a critical peak (CP) rebate program. The core idea is this: when
10 the Company declares a CP-event and notifies participating customers, those customers
11 that reduce their usage during the CP-event period get an on-bill credit. The credit provides
12 the incentive for customers to reduce their usage during declared CP-events. Participation
13 is voluntary.

14 **Q. How is that any better than DTEE’s current Dynamic Peak Price (DPP) rate?**

15 A. DTEE’s DPP rate schedule (D1.8) is a time-of-use schedule, with a very high (\$0.95/kWh)
16 rate during declared CP-events.

17 The CP-rebate programs have several advantages over the DPP rate schedule:

⁷² Direct testimony of K. O. Farrell, pg. KOF-49 & KOF-50

⁷³ Ibid, KOF-51

- 1 1. A CP-rebate program offers a reward (a bill credit) vs. a punishment (a very high rate
2 for the duration of the event). Customers may be reluctant to sign up for a program that
3 will charge them a high rate, fearing that either they will miss a notification or that they
4 will be out-of-town, and unable to adjust their air conditioner. With a rewards-based
5 program, the worst thing that happens is that the customer misses the opportunity to get
6 the reward.
- 7 2. It isn't a rate schedule. The number of rate schedules available to customers is already
8 overwhelming and confusing. Other electric suppliers offer a CP-rebate program that
9 can be added by any residential or commercial customer on any (or nearly any) rate
10 schedule.
- 11 3. With D1.8's punishingly high rate during CP events, the utility is obliged to limit the
12 number of CP-events that can be declared. Few customers would dare to sign up for the
13 DPP rate if the Company could declare a CP-event every day. Some of the CP-rebate
14 programs I'll describe below have a limit on the number and/or duration of declared
15 CP-events, but others do not. Given DTEE witness Sharma's declaration that DR
16 events may become more frequent in the future, this could be a major advantage to the
17 Company and its customers.

1 **Q. What are the advantages of a CP-rebate program vs. service interruption programs**
2 **like CoolCurrents, SmartSavers, and interruptible water heating?**

3 A. For one, it doesn't require DTEE installed equipment at the customer site. Equipment
4 installed at customer sites must be maintained and periodically replaced. Given the
5 difficulties DTEE has reported with CoolCurrents RCUs and LCDs, this is a major
6 advantage.

7 Secondly, a CP-rebated program is not technology specific. The customer can reduce their
8 usage in any manner or manners they choose. They may simply turn up their thermostat to
9 reduce their air conditioning load (without the need for a smart thermostat, or an LCD).

10 They may turn down the setpoint on their water heater (without the need for an LCD).

11 They may reschedule activities like washing clothes or dishes. Or they may take more
12 dramatic actions. A customer with a solar + battery system may choose to isolate from the
13 grid and run on their own solar generation and battery. A customer with a generator may
14 choose to isolate from the grid and power their facility with their generator (there are
15 numerous commercial customers with sizable loads and generators); and the generator
16 doesn't need remote start-up capability. A customer with an EV and vehicle-to-load (V2L)
17 capability (such as the Ford F-150 Lightning) may isolate from the grid and power their
18 home with their EV. These are just a few ideas that come easily to mind. By creating an
19 easy-to-understand reward program, we could unleash the full creativity and innovation of
20 customers throughout the service territory! The possibilities for peak load reduction are
21 limited only by the imaginations of the customers, and the size of the incentive given.

1 **Q. Who would administer this program?**

2 A. In other jurisdictions, CP-rebate programs are sometimes run by the utility, and other times
3 by a third-party aggregator. In its order of December 21, 2022, in case U-21099, the
4 MPSC lifted the prohibition on demand response aggregation resources participating in
5 wholesale power markets for commercial and industrial customers with a minimum
6 enrollment size of 1 MW, but not for residential customers or smaller C & I customers.⁷⁴
7 So for now, a program that would allow participation by residential and small commercial
8 customers would need to administered by DTEE, unless and until the Commission expands
9 the opportunity for DR aggregation to smaller customers.

10 **Q. How could DTEE determine how much the CP-rebate customer reduced their usage**
11 **as a result of the CPP-event vs. how much they would have used otherwise?**

12 A. The programs I've seen compare the customer's actual usage during the event to that same
13 customer's usage during the same hours in recent days.

14 **Q. Is determining how much energy was saved by comparing it to the usage of the**
15 **customer over a prior time period a new concept to DTEE?**

16 A. No, DTEE is already doing this to estimate the capacity value of DR programs⁷⁵, though it
17 may be new functionality for the Company's billing system.

18 **Q. What electric utilities offer a CP-rebate program like the one you describe?**

19 A. In searching the web, GLREA's research staff found several:

⁷⁴ U-21099, Order dated December 21, 2022, page 49

⁷⁵ GLREADE-2.21a & 2.21d

- 1 1. Southern California Edison (SCE) runs a program called Power Saver Rewards. SCE may
2 declare up to 12 events, for 5 hours each. Customers earn \$1.00/kWh reduced during the
3 event, paid as an annual bill credit. There is no penalty for not responding. Each
4 customer's consumption is compared to the same time period during the prior 10 business
5 days, and the savings calculated against the 5 highest energy consumption days of those 10
6 business days. The program includes a smartphone app called ClimateResponseapp from
7 Olvine which allows enrollment and provides the notifications. Power Savers specifically
8 includes customers with their own solar energy system.⁷⁶
- 9 2. In Delaware, Delmarva Power offers a Peak Energy Savings Credit when the utility
10 announces a Peak Savings Day. Customers automatically get a call the night before an
11 event, or can choose to be notified of an event via text or email. Customers earn a credit of
12 \$1.25/kWh saved "below your average energy use." ⁷⁷ An apparently identical program is
13 offered in Maryland by Pepco (also an Exelon company).⁷⁸
- 14 3. In Colorado, the Holy Cross Energy co-op offers a similar program called Peak Time
15 Payback. The Company declares "high alerts," during which customers earn a credit of
16 \$.75/kWh, and "critical alerts," during which customers earn a credit of \$1.50/hour. The
17 amount of energy saved is computed by "an algorithm that determines your expected

⁷⁶ Southern California Edison, "Power Saver Rewards FAQ." Accessed on 7/9/2024 at:
<https://powersaver.sce.com/faq/>

⁷⁷ Delmarva Power, an Exelon Company, "About Peak Energy Savings Credit." Accessed on
7/9/2024 at: <https://www.delmarva.com/ways-to-save/for-your-home/delaware/peak-energy-savings-credit/about-peak-energy-savings-credit>

⁷⁸ Pepco, an Exelon Company, "About Peak Energy Savings Credit." Accessed at 7/9/2024 at:
<https://www.pepco.com/ways-to-save/for-your-home/maryland/peak-energy-savings-credit/about-peak-energy-savings-credit>

1 electricity usage at the time of predicted high demand (based on your historical usage
2 patterns).” Program is limited to no more than *96 Peak Time Payback hours* per calendar
3 year.⁷⁹ This program illustrates the flexibility a voluntary rebate program offers. There is
4 no mention of a maximum event duration, and it can support a very high number of CP-
5 events – if each event were 4 hours, Holy Cross Energy could declare 24 events during the
6 year! At the end of 2023, Holy Cross reported that they have 3,022 residential and
7 commercial customers enrolled (6.6% of their eligible customers).⁸⁰

- 8 4. In Virginia, Dominion Energy offers a similar program called Peak Time Rebates. Event
9 notification is via text or email. The utility expects about 10 events per year, each for no
10 more than four hours. Usage during the event is compared to the customer’s average usage
11 during those same hours during the 10 prior weekdays. Customers receive a credit of
12 \$1.25/kWh. Dominion recommends that customers *prepare* for an event by pre-cooling
13 their home and planning a dinner that doesn’t need the oven.⁸¹

⁷⁹ Holy Cross Energy, “Peak Time Payback.” Accessed on 7/9/2024 at:
<https://www.holycross.com/member-programs/peak-time-payback>

⁸⁰ Holy Cross, “2023 Annual Report,” slide 6. Accessed at: https://holycross.com/wp-content/uploads/2024/06/HCE_AnnualReport2023_Email.pdf

⁸¹ Dominion Energy, “Peak Time Rebates Program.” Accessed on 7/9/2024 at:
<https://www.dominionenergyptr.com/#toggle-id-11>

1 5. In Oregon, PGE also offers a program called Peak Time Rebates. Notifications are sent via
2 email or text. Usage during the event is compared to the prior 10 days during the same
3 hours, but adjusted for temperature. Customers earn a credit of \$1.00/kWh. PGE reports
4 that “22% of PGE customers are participating in energy shifting programs like Peak Time
5 Rebates.”⁸²

6 6. In Maryland, BGE offers a very similar program called Smart Energy Rewards. BGE
7 “plans to call up to 3” Energy Savings Days per summer, during the period of 2pm to 6pm.
8 Notifications may be provided via phone, email, text and mobile app alert, or combinations
9 of those. Customers receive a credit of \$1.25/kWh for reduction beyond the cycling of their
10 air conditioner (BGE has another DR program with air conditioning interruption that runs
11 in parallel with this). Energy consumption is compared to the prior 14 days with similar
12 weather. In an interesting variation, there is no enrollment required.”⁸³

⁸² PGE, “Peak Time Rebates.” Accessed on 7/9/2024 at: <https://portlandgeneral.com/save-money/save-money-home/peak-time-rebates>

⁸³ BGE, an Exelon Company, “Frequently Asked Questions.” Accessed on 7/9/2024, at: <https://www.bge.com/ways-to-save/for-your-home/energy-savings-days/ser-faqs>

1 7. In Illinois, Ameren has a “Peak Time Rewards” program. Events are declared with alerts
 2 sent to customers via email or text. The amount of reduction is computed based on the
 3 customer’s prior usage.⁸⁴ Customers earn between \$0.50 and \$2.00/kWh (it varies by
 4 year).⁸⁵ The program started in 2015, and had more than 130,000 participants in 2021.⁸⁶

5 8. Right here in Michigan, Consumers Energy offers “Peak Time Rewards.” Customers enroll
 6 and provide an email address. The utility can declare up to 14 events, between 2pm and
 7 6pm. The amount of reduction is computed based on the customer’s “typical energy use on
 8 similar weather days when there is no event.” Customers earn \$1/kWh of reduced use.

9 All of the above programs have common elements. Customers usually must enroll. There
 10 is a notification of an event given via text and/or email and/or an automated phone call.

11 Customers may optionally choose to reduce their energy consumption in any manner of
 12 their choosing. There is no penalty for ignoring an alert. The utility’s billing system
 13 compares their usage during the event to their usage during “similar” recent times and
 14 computes the kWh load reduction. The customer gets a bill credit of a specific amount per
 15 kWh saved, varying from a low of \$0.75/kWh to a high of \$1.50/kWh, depending on the
 16 program and the type of event.

⁸⁴ Ameren, “Peak Time Rewards.” Accessed on 7/17/2024 at:
<https://www.ameren.com/illinois/account/customer-service/bill/peak-time-rewards/details#a0364d9a-5104-49a9-8f0f-ea1e20ac5aaa-971f87fd-59aa-4d3e-a1c3-ad77472a1962>

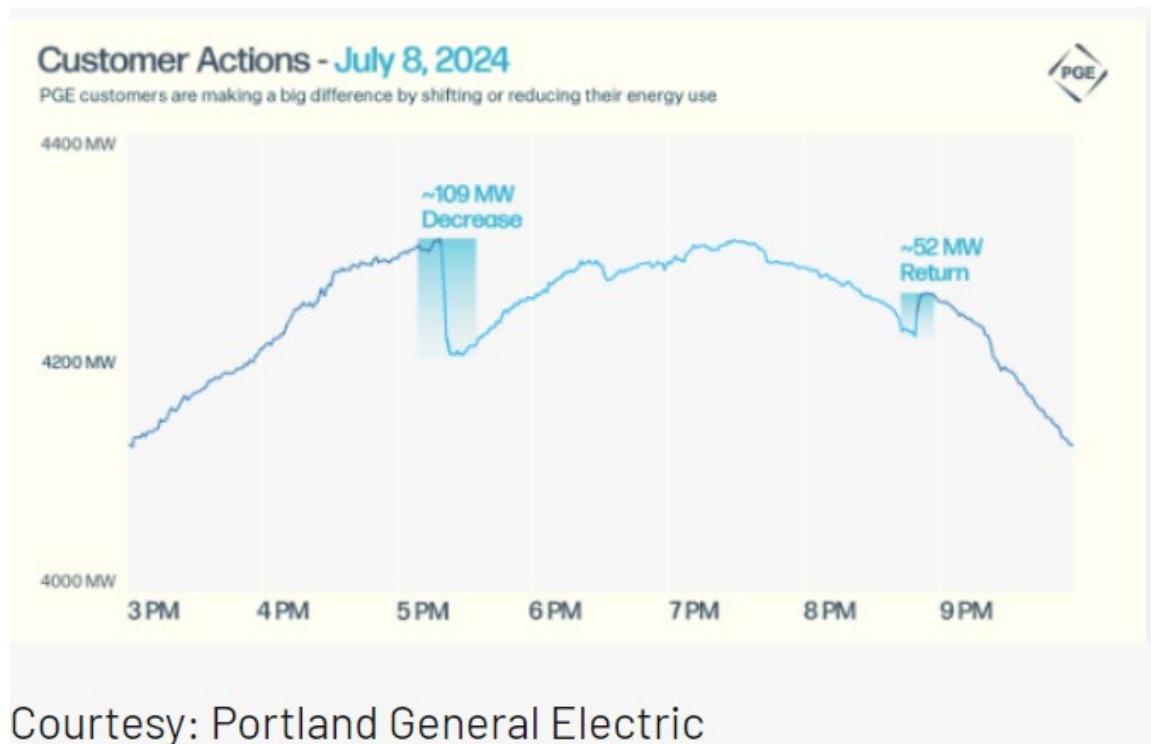
⁸⁵ “Ameren Illinois’ Peak Time Rewards,” *Citizens Utility Board*, May 2021. Accessed on 7/17/2024 at: <https://www.citizensutilityboard.org/wp-content/uploads/2017/02/AmerenPTR.pdf>

⁸⁶ “Smart Energy Options,” *Elevate*. Accessed on 7/17/2024 at:
<https://www.elevatenp.org/smart-electricity-options/>

The critical feature is that the CP-rebated program does not proscribe *how* the customer will save energy during the event. This is left up to the ingenuity of the customer. This could be particularly important for commercial customers, who use energy in so many different ways, providing a wide variety of options for reducing their consumption.

Q. Can peak rebate programs shift significant amounts of load during events?

A. Yes. On July 8, 2024, PGE (Portland) instituted voluntary energy shifting. They report that 21% of the customer base responded, causing a very rapid decrease in load of 109 MW. Load immediately prior to the event was approximately (reading the graph) 4300 MW, so this was a reduction of $(109 \text{ MW} / 4300 \text{ MW} = .025)$ 2.5% of peak load of the entire system:⁸⁷



⁸⁷ John Engle, “How an Oregon utility achieved the largest customer demand shift in history,”

1 **Q. Does DTEE have any pilot programs that are similar to the CP-rebate programs you**
 2 **describe?**

3 A. Not that I'm aware of. The only one that appears related is the DR Residential Generator
 4 Pilot, described in KOF-39 through KOF-42 and exhibit A-12, schedule B5.6.2. The DR
 5 residential battery pilot suffers several disadvantages when compared to a CP-rebated
 6 program:

7 1. It's limited to one technology – customer owned generators. Anyone with a generator
 8 could participate in a CP-rewards program, but so could lots of customers without a
 9 generator.

10 2. It requires that the customer have a subscription to "Mobil Link". Compared to current
 11 DTEE DR programs, this has the significant advantage of avoiding an LCD, but the
 12 Company provides no data on how prevalent Mobile Link subscriptions are amongst
 13 residential customers with generators. The Company has found only 6,200 residential
 14 customers with generators and mobile-link in DTEE's service territory.⁸⁸ This small set
 15 of eligible customers severely limits the potential peak demand reduction this program
 16 could theoretically achieve.

Power Grid International, July 15, 2024. Accessed on 7/16/2024 at: <https://www.power-grid.com/der-grid-edge/how-an-oregon-utility-achieved-the-largest-customer-demand-shift-in-its-history/>

⁸⁸ GLREADE-2.12bi

1 3. Once enrolled, the customer's generator will be automatically started during an event.

2 While enrollment is voluntary, customers may not like their generator starting and
3 stopping outside of their control. In a CP-rebate program, starting and stopping the
4 generator would be under the control of the customer, and would occur at the discretion
5 of the customer.

6 4. It appears that the incentive to the customer is in no way proportional to their load
7 shed, at least during the pilot program. A customer gets a gift card upfront, and another
8 for remaining enrolled for the duration of the pilot term. In a CP-rebate program, the
9 credit the customer receives is based on the kWh they reduced usage during the event.

10 **Q. Are you saying that the proposed DR residential generator pilot should be denied**
11 **recovery of costs?**

12 A. No, I support the DR residential generator pilot. Unlike most of DTEE's existing DR
13 programs, the customer will not lose some valuable service during the event; that's a big
14 advantage in gaining enrollees. I think a similar customer generator program for
15 *commercial* customers would have a much greater DR value, because so many commercial
16 buildings have large loads and large backup generators.

17 But a CP-rebate program could be far better than the generator pilot, because it would be
18 available to a vastly greater number of customers than any program limited to customers
19 with backup generators with the mobile link option.

1 **Q. What should the Commission do regarding critical-peak rebate programs?**

2 A. The Commission should direct the Company, in its next rate or demand response case, to
3 propose a robust pilot of CP-rebate program, structured like those I have described in this
4 testimony. If the Company resists, the Commission should create the opportunity for a
5 third-party aggregator to do so.

6 **E. GRID INTERACTIVE WATER HEATER PROGRAMS**

7 **Q. What other kind of DR program has been shown to be successful in other**
8 **jurisdictions?**

9 A. Grid interactive water heater DR programs.

10 **Q. What is a grid interactive water heater (GIWH) DR program?**

11 A. Grid interactive (electric) water heaters allow the utility to turn the water heater's set-point
12 both up and down, or to reduce the heating *rate*. Unlike simpler interruption devices, like
13 the LCDs that DTEE is using in its interruptible water heating service, GIWHs can pre-
14 heat the water to a higher-than-normal temperature in advance of a critical peak period.
15 This allows for allows interruption of service for a period of time with no customer impact.

1 **Q. What are the advantages of grid interactive water heaters for the utility?**

2 A. In addition to the usual benefits of any DR program, grid interactive water heaters can
3 store energy from peak solar output in the afternoon and turn the load off during peak load
4 during the evening. Unlike service interruption-based services, it can absorb energy at
5 times of excess production, reducing the “duck curve”. Here’s a description from
6 Guidehouse Insights:

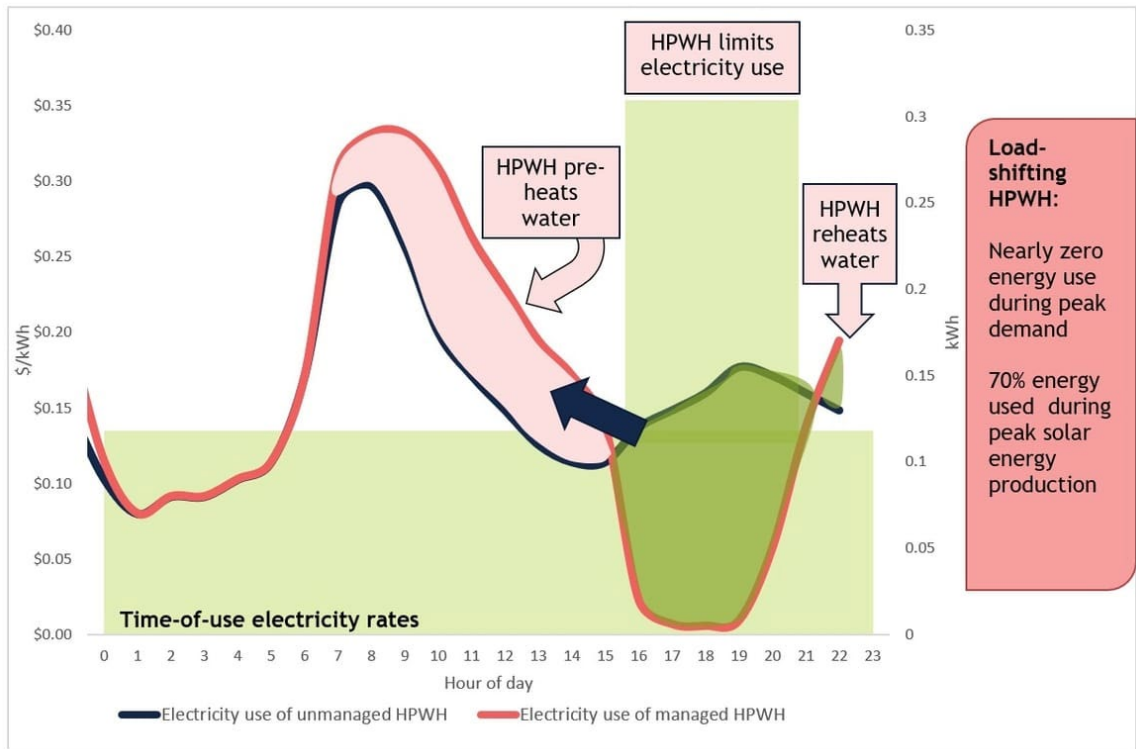
7 “Water heaters are one of the most ubiquitous pieces of equipment in the
8 building sector. In addition to being essential for everyday life, water
9 heaters offer enormous thermal storage and load flexibility potential. In
10 the US, water heating is the [second-largest single end use energy user](#) after
11 space heating, accounting for roughly 19% of overall energy use in
12 homes.

13 When made electric and equipped with two-way grid communication
14 abilities, storage water heaters become known as grid-interactive water
15 heaters (GIWHs). Two-way grid communication allows grid operators to
16 heat water in customers’ homes at any point throughout the day. Water
17 heating is a [flexible end use](#), and if hot water is available when the
18 consumer needs it, it can be heated at another point during the day. The
19 thermal mass of the water in the tank acts as a virtual storage device for
20 the energy used to heat it, ensuring that zero-carbon electricity isn’t
21 wasted.

22 In a grid increasingly powered by renewable sources that are often at high
23 output levels when demand is low, GIWHs enable load shifting to make
24 demand for hot water follow supply. Excess solar energy in the early
25 afternoon that would have otherwise been curtailed could be used to heat
26 water in anticipation of the evening demand ramp when people return
27 home from work and school.”⁸⁹

⁸⁹ Grid-Interactive Water Heaters Are Important VPP Resources,” *Guidehouse Insights*, November 12, 2021. Accessed on 7/15/2021 at: <https://guidehouseinsights.com/news-and-views/grid-interactive-water-heaters-are-important-vpp-resources>

This illustration from Canary Media shows how grid-interactive water heaters can store peak mid-day solar energy to meet demand in the evening:⁹⁰



⁹⁰ Jeff St. John, “Home water heaters: A new ally in making grids cleaner,” *Canary Media*, April 11, 2022. Accessed on 7/15/2024 at: <https://www.canarymedia.com/articles/grid-edge/home-water-heaters-a-new-ally-in-making-grids-cleaner>

1 **Q. Is the GIWH a new idea?**

2 A. No. Demonstrations were being done back in 2013.⁹¹ ACEEE published a paper
3 on it in 2016, reporting on two pilots completed in 2015.⁹² An article from Utility
4 Dive in 2017 listed pilots at Portland General Electric (PGE), Arizona Public
5 Service (APS), and Green Mountain Power (GMP).⁹³

6 **Q. Have utilities in other jurisdictions implemented GIWH DR programs?**

7 A. Yes, the GLREA’s research team found several:

8 1. Hawaiian Electric started a GIWH program called “Energy Scout” in 2005. By 2012,
9 they had 34,000 residential customers totaling 15 MW of DR curtailment capacity;
10 participants receive a \$3/month bill credit. By 2024 the program had 161 commercial
11 customers totaling 1 MW, who receive a \$5/month bill credit.⁹⁴

⁹¹ Jeff St. John, “The Water Heater as a Grid Battery, Version 2.0,” *Green Tech Media*, November 8, 2013. Accessed on 7/15/2023 at:
<https://www.greentechmedia.com/articles/read/the-water-heater-as-grid-battery-version-2-0>

⁹² David Podorson, E Source, “Grid Interactive Water Heaters – How Water Heaters Have Evolved Into a Grid Scale Storage Medium,” (c) 2016 ACEEE. Accessed on 7/15/2024 at:
https://www.aceee.org/files/proceedings/2016/data/papers/6_336.pdf

⁹³ Herman K. Trabish, “Utilities in hot water: Realizing the benefits of grid-integrated water heaters,” *Utility Dive*, June 20, 2017. Accessed on 7/15/2024 at:
<https://www.utilitydive.com/news/utilities-in-hot-water-realizing-the-benefits-of-grid-integrated-water-hea/445241/>

⁹⁴ Hawaii Electric, “Customer Incentive Programs.” Accessed on 7/20/2024 at:
<https://www.hawaiianelectric.com/products-and-services/customer-incentive-programs/energy-scout> . Also: “Our History and Timeline”, at: <https://www.hawaiianelectric.com/about-us/our-history>

- 1 2. Portland General Electric started the “Connected Water Heaters” program for property
2 managers of residential buildings in 2018. Property managers earn \$20 per water heater
3 per year.⁹⁵
- 4 3. Southern California Edison has a program called “SmartShift Rewards.” Customers
5 must have an electric water heater that uses the CTA-2045 protocol, and has a mixing
6 valve (to avoid scalding). Participants earn an enrollment bonus of \$50 and \$5/month
7 they participate.⁹⁶
- 8 4. Xcel Energy in Colorado has a program called “Smart Water Heater Program.” It
9 requires a heat pump water heater and a mixing valve. Enrollees earn a \$75 enrollment
10 credit and a \$25 per year bill credit.⁹⁷
- 11 5. Fort Collins Utilities operates a program provided by a Company named Itron, which
12 provides full turnkey support, including a cloud-based Distributed Energy Resource
13 Management (DERM) solution. The program also uses the CTA-2045 protocol.⁹⁸

⁹⁵ Portland Electric, “Connected Water Heaters,” accessed on 7/20/2024 at: <https://portlandgeneral.com/property-managers/connected-water-heaters> and also: “Water Heaters Get Smart” at: <https://www.multifamilynw.org/news/water-heaters-get-smart--and-give-you-a-cash-bonus>

⁹⁶ Southern California Edison, “Save Money with Smart Water Heater Rewards,” June 3, 2024. Accessed at 7/20/2024 at: <https://energized.edison.com/stories/save-money-with-smart-water-heater-rewards> Also: “About SmartShift Rewards at: <https://smartshiftrewards.com/faqs/>

⁹⁷ Xcel Energy, “Smart Water Heater Program.” Accessed on 7/20/2024 at: <https://co.my.xcelenergy.com/s/residential/home-rebates/smart-water-heaters> Also:

⁹⁸ Power Grid International, “Fort Collins Utilities adds grid-interactive water heater program to its DERMS solution,” June 23, 2021. Accessed on 7/20/2024 at: <https://www.power-grid.com/der-grid-edge/fort-collins-utilities-adds-grid-interactive-water-heater-program-to-its-derms-solution/>

1 **Q. Are there any non-utility aggregators that run programs with GIWHs?**

2 A. Yes, we found two examples:

3 1. An aggregator called Shifted Energy has been working with Hawaiian Electric for
4 years, and learned from that experience. Shifted Energy provides a cellular Internet of
5 Things chip in an off-tank controller installed in the electric line that powers the water
6 heater. This allows control and data collection independent of the customer's internet
7 network, and includes cybersecurity. It also provides high-quality, high-frequency
8 data.⁹⁹

9 2. An aggregator called Mosaic Power runs a network of 20,000 GIWHs spread from
10 Maryland to Ohio in the PJM region. Mosaic uses the water heater network to
11 participate in the PJM frequency regulation market.¹⁰⁰

12 **Q. Has DTEE considered a GIWH program?**

13 A. No, in discovery, they admit that: "The Company has not explored such a program."¹⁰¹

I. ⁹⁹ Randall Fish and Trevor Gibson, "Two Birds, One Water Heater: How Shifted Energy and Hawaiian Electric are Helping Hawaii Meet its Clean Energy Goals," *Smart Power Alliance*, October 10, 2019. Accessed on 7/20/2024 at: <https://sepapower.org/knowledge/two-birds-one-water-heater-how-shifted-energy-and-hawaiian-electric-are-helping-hawaii-meet-its-clean-energy-goals/>

¹⁰⁰ Mosaic Power, "Yes, Water Heaters Can Do That." Accessed on: 7/20/2024 at: <https://mosaicpower.com/yes-water-heaters-can> and also: "Our Story" at: <https://mosaicpower.com/our-story>

¹⁰¹ GLREADE-3.38

1 **Q. What should the Commission do regarding grid-interactive water heaters?**

2 A. The Commission should direct the Company, in its next rate or demand response case, to
3 propose a robust grid-interactive water heater pilot program. If the Company resists, the
4 Commission should create the opportunity for a third-party aggregator to do so.

5 **VI. DTEE NWA PILOTS**

6 **Q. Did the Company propose pilot programs of non-wires alternatives (NWA)?**

7 A. Yes, responding to the Commission's dated August 20, 2020 in U-20147 explicitly
8 directing DTEE to do so, DTEE presented nine NWA pilots, including six that had been
9 approved in U-21297, order dated December 1, 2023. DTEE believes they "have the
10 potential to become economic alternatives to infrastructure upgrades."¹⁰²

11 **Q. What is your general reaction to the Company's proposed NWA pilots?**

12 A. They're very promising. The Company's pilots include: trying mobile batteries for event
13 restoration (Mobile Trailer), batteries to address sub-station overloading (Omega),
14 batteries plus solar to address sub-station overloading (Port Austin). I'm especially
15 excited that they're trying geo-targeted EWR and DR to relieve a substation (Fisher).

16 **Q. What do you find exciting about the Fisher pilot, which uses geo-targeted EWR and**
17 **DR?**

18 A. It demonstrates that the value of energy and capacity are *location specific*, something I
19 discussed in testimony in U-20359, in the context of customer owned, behind the meter
20 solar:

¹⁰² Direct testimony of S. M. Hartwick, pg. SMH-52 and SMH-53, lines 5-6

“DG outflow enters the I&M grid on the distribution network, at the point of use. This has a greater *locational value* than energy that enters the I&M network at the PJM hub interconnect. The DG outflow energy does not have to pass through miles of transmission and distribution system wires and transformers, and does not incur their line losses. If energy at the point of use was not more valuable than energy at central hubs, customers would not pay distribution charges.”¹⁰³

DTEE’s pilot design apparently recognizes that energy and capacity in a geographic region served by a stressed sub-station is worth more than energy and capacity in other geographic regions. The Lawrence Berkely National Laboratory published a study on how DERs can provide value to the distribution system, stating:

“This report focuses on the locational value of DERs for distribution systems... Locational value of DERs is important in large part because utility investments in electricity distribution systems account for the largest portion of capital expenditures for U.S. investor-owned utilities—29% in 2019 (\$39 billion), according to Edison Electric Institute. Further, that share is increasing, up from 22% in 2013.”¹⁰⁴

This is a principle that can be effectively expanded.

Q. How should the principle that energy and capacity have locational value be expanded?

A. In addition to geo-targeted EWR and DR, the Company should pilot geo-targeted incentives for customer-owned distributed generation. As I’ve testified in the past, “From the viewpoint of the Company’s grid (on the Company’s side of the meter), this [DG customer self-consumption] is *indistinguishable* from a reduction in their load achieved

¹⁰³ U-20359, 7 V 2713, lines 11-16

¹⁰⁴ Frick, Price, Schwartz, Hanus, and Shapiro, “Locational Value of Distributed Energy Resources,” *Lawrence Berkely National Laboratory*, February, 2021, page 1. Accessed on 7/16/2024 at: https://eta-publications.lbl.gov/sites/default/files/lbnl_locational_value_der_2021_02_08.pdf

1 by other means.”¹⁰⁵ Additionally, the outflow from the DG systems will provide
 2 additional load relief to the local grid.

3 **Q. Could customer-owned DG provide meaningful amounts of capacity to a geo-targeted**
 4 **area?**

5 A. Yes. A recent study showed that, on a national basis, rooftop solar could meet 45% of U.S.
 6 electricity demand in 2022.¹⁰⁶ In November of 2022, Texas regulators approved an
 7 aggregated customer-DER (Telsa Powerwalls) pilot targeting 80 MW of capacity. It was so
 8 successful that the Texas PUC wants to expand it.¹⁰⁷

9 **Q. What should the Commission do regarding geo-targeted incentives for customer-**
 10 **owned DG systems?**

11 A. The Commission should direct the Company, in its next rate case or demand response case,
 12 to propose a pilot of geo-targeted incentives for customer-owned distributed energy
 13 systems (including batteries).

¹⁰⁵ U-20836, 8 V 3188-3189, lines 20 and 1-2, respectively

¹⁰⁶ Ryan Kennedy, “Rooftop solar has the technical potential to meet 45% of U.S. electricity demand,” *PV Magazine*, February 20, 2024. Accessed on 7/16/2024 at: <https://pv-magazine-usa.com/2024/02/20/rooftop-solar-has-technical-potential-to-meet-45-of-u-s-electricity-demand/>

¹⁰⁷ Robert Walton, “Texas regulators look to expand successful 80 MW virtual power plant pilot,” *Utility Dive*, December 15, 2023. Accessed on 7/16/2024 at: <https://www.utilitydive.com/news/Texas-to-expand-ADER-80-mw-distributed-energy-resources/702641/>

1 **VII. DTEE’S BATTERY PROGRAM**

2 **Q. Has DTEE embarked on any battery programs, larger than NWA pilots discussed**
 3 **above?**

4 A. Yes, in U-21566, DTEE received Commission approval to install a 220-MW / 880 MWh
 5 battery energy storage system (BESS) at the site of the retired Trenton Channel coal
 6 power plant at a cost between \$423 and \$460 million.¹⁰⁸

7 **Q. Why did the Company decide to install a 220-MW BESS system at this time?**

8 A. It specified in the settlement agreement in U-21193:

9 “DTE Electric will accelerate the storage build timeline in its PCA as
 10 follows and as shown in Table 3 below: 160 MW of storage will be
 11 accelerated from 2026 and 2027 to facilitate the Company’s Trenton
 12 Channel storage project (totaling 220 MW), with a target COD in
 13 2025...”¹⁰⁹

14 **Q. What reasons did the Company give for installing the BESS at Trenton Channel?**

15 A. The Company named three:¹¹⁰

- 16 1. Repurpose existing MISO transmission interconnect rights
- 17 2. Redevelop an existing brownfield and maintain presence in the Community
- 18 3. Because the Trenton Channel site is in an “energy community,” the installation gets an
 19 additional 10% of the cost in an investment tax credit.

¹⁰⁸ U-21566, Commission order dated March 15, 2024, pages 2 and 4

¹⁰⁹ U-21193, Commission order dated July 26, 2023, page 10

¹¹⁰ U-21566, Affidavit of Terri L. Schroeder, pg. 4-5

1 **Q. Did the Company explain why repurposing MISO transmission interconnect rights**
 2 **was important?**

3 A. Yes. The Company estimated that getting transmission interconnect approval in another
 4 site would take between 330 and 473 days.¹¹¹

5 **Q. What benefits does the Company expect from the BESS being installed at Trenton**
 6 **Channel?**

7 A. The Company's application names three:¹¹²

8 1. Price arbitrage, charging during off-peak and discharging during peak demand

9 2. Providing capacity to the MISO Planning Resource Auction (PRA)

10 3. Selling ancillary services into the MISO market

11 **Q. Has the Company forecasted any new, large BESS systems in the instant case?**

12 A. Yes. The Company is forecasting the operation "of *a* 275 MW BESS" in 2028.¹¹³
 13 (emphasis added). I note the use of the singular indefinite article "a" to describe the new
 14 BESS capacity addition as a single system.

¹¹¹ Ibid, pg. 5

¹¹² U-21566, Company application, pg 4

¹¹³ Direct testimony of M. E. Guillaumin, pg MEG-9, rows 24-5

Q. Did the settlement agreement in the Company’s last IRP require this new BESS?

A. The settlement agreement in U-21193 targets the addition of 275 of Company owned BESS capacity in 2028; it did not specify that it should be installed as a single system or at a single location:

“The Company will target the following capacity allocation for storage projects:”

Table 3 Target Storage Timeline and Capacity Allocation								
Storage	2024	2025	2026	2027	2028	2029	2030	Total
PCA Build	0	230	0	120	430	0	0	780
Company Owned	0	230	0	0	275	0	0	505
Third Party Owned	0	0	0	120	155	0	0	275

If the winning bids in any annual solicitation *do not amount to* the desired RFP capacity in any annual solicitation, the unfulfilled capacity in each allocation category (company owned and third party owned) will be carried forward...”¹¹⁴ (emphasis added)

The term “do not amount to” implies multiple bids adding up to the desired capacity. There is no requirement to locate the entire 275 MW of BESS capacity in one location, or that the BESS(s) connect to the transmission system.

Q. Is there any reason to think that the Company will install the entire 275MW of BESS capacity at a specific location?

A. Yes, there are two things that make me *think* that the Company is inclined to install the entire 275 MW of company-owned BESS at one location:

¹¹⁴ U-21193, Order dated July 26, 2023, page 10

1 1. The Company mentions both the retirement of Monroe units 3 and 4 and commencing
2 operations of the 275 MW BESS in the same sentence, occurring in the same year.¹¹⁵

3 2. Precedent. Having connected the prior large BESS system to the transmission grid at
4 the site of a retired coal plant (Trenton Channel), the Company may be inclined to do
5 so again, citing the same benefits.

6 **Q. How did the Company respond to discovery about their plans to install 275MW of**
7 **BESS capacity?**

8 A. The Company stated that no decision has been made:

9 “The Company is exploring potential locations for the 275 MW of BESS
10 capacity being added in 2028 but has not narrowed down any sites
11 specifically. No determination has been made as to whether the storage
12 will be installed at one location or multiple locations.”¹¹⁶

13 **Q. Could deploying the 275 MW of BESS by 2028 in smaller units at multiple**
14 **substations, connected to the distribution system, avoid the schedule delays caused by**
15 **the MISO interconnect process, and provide additional benefits as well?**

16 A. Yes. Deploying smaller BESSs, co-located with DTEE substations and connected to the
17 distribution grid would avoid the MISO interconnect process entirely, and would provide
18 additional, local benefits. The Lawrence Berkely National Laboratory issued a report in
19 2021 on the “Locational Value of Distributed Energy Resources. The report states:

20 “Distributed energy resources (DERs) offer several potential sources of
21 utility system value. Primary electricity system benefits include deferred
22 or avoided costs for distribution and transmission capacity, avoided
23 distribution and transmission energy losses, deferred or avoided costs of
24 power plant capacity, and avoided hourly and subhourly costs of

¹¹⁵ Direct testimony of M. E. Guillaumin, pg. MEG-9, rows 21-25

¹¹⁶ GLREADE-2.33a-b

electricity generation or wholesale electricity purchases. Examples of secondary benefits include avoided ancillary services costs, reduced wholesale market clearing prices, increased reliability and power quality, avoided risks associated with long lead-time investments, reduced environmental cost risk, and improved fuel diversity and energy security (SEE Action 2020a). Several of these benefits require the value of DERs to be assessed at a specific point on the grid—the locational value”¹¹⁷

and

“Accurately valuing all potential distribution system solutions, including consideration of the locational value of DERs, is increasingly important for reliable, least cost electricity systems”¹¹⁸

and

“Yet few utilities and states consider their value at specific points on the electric system in planning, procurement, and design of DER programs and rates.”¹¹⁹

and

“DERs that reduce demand during distribution system peak produce the most value”¹²⁰

Q. What additional benefits could be provided by smaller BESS systems located at DTEE substations, compared to the Trenton Channel BESS installation?

A. Several. First, as DTEE is demonstrating in some of their NWA pilots, co-locating batteries at substations with either stressed substation capacity, or a stressed sub-transmission line can delay or avoid costly equipment upgrades.

Secondly, rather than sell the capacity on the MISO market like the Trenton Channel

¹¹⁷ Frick, Schwartz, Price, “Locational Value of Distributed Energy Resources,” (the report), *Lawrence Berkely National Laboratory*, February 2021. Accessed on 7/17/2024 at: https://eta-publications.lbl.gov/sites/default/files/lbnl_locational_value_der_2021_02_08.pdf

¹¹⁸ Frick, Schwartz, Price, “Locational Value of Distributed Energy Resources” (a PowerPoint), March 9, 2021, slide 6. Accessed on 7/16/2024 at: https://eta-publications.lbl.gov/sites/default/files/lbnl_locational_value_20210309_final.pdf

¹¹⁹ Ibid, slide 4

¹²⁰ Ibid, slide 10

1 system, the BESS would provide the capacity to the local grid. As I discussed above,
 2 capacity and energy have locational value; they're more valuable in a stressed substation
 3 than the price they are likely to fetch on the wholesale market, as the Company is
 4 demonstrating in the Omega, Fisher, and Veridian NWA pilots.

5 **Q. What other benefits could be achieved with BESSs located at DTEE substations?**

6 A. Rather than selling the ancillary services on the MISO wholesale market, the BESS
 7 would provide ancillary services, including voltage and frequency regulation to the local
 8 grid, as is being demonstrated in the O'Shea NWA battery pilot.

9 **Q. Are there other benefits to co-locating BESS at DTEE substations?**

10 A. Yes, several:^{121,122}

11 1. Zero transmission cost and zero transmission loss, because the transmission system
 12 is bypassed.

13 2. Reduced line losses, by reducing load during peak periods, when line losses are the
 14 highest.

15 3. Increased grid hosting capacity.

16 4. Reduced curtailment of renewable energy facilities in the area (if there is, or would
 17 soon be any such curtailment).

18 5. A small solar system could be added at the site (space permitting), which would use

¹²¹ Ibid, slide 7.

¹²² Illinois Commerce Commission, "Energy Storage Program." Accessed on 7/16/2024 at:
<https://www.icc.illinois.gov/informal-processes/energy-storage-program>

the BESS to shift its output to the peak period. Such a system would form the foundation of a micro-grid.

6. The provision of emergency power to the region, if cut off from the distribution system.

Q. Don't we need some storage tied to the transmission network?

A. I don't know if transmission connected storage is critical or not; but we already have a huge energy storage system connected to the transmission system in Michigan – the Ludington Pumped Storage Facility (LPSF). DTEE owns 49% of the LPSF, giving DTEE 7,699 MWh of energy storage already connected to the transmission system, and operating (for decades).¹²³

If additional transmission connected storage were needed, there is a non-utility model to add it. A Company named Intersect Power is installing massive storage in Texas and California to do price arbitrage between peak pricing and off-peak pricing. According to the Wall Street Journal:

“The company has agreed to buy billions of dollars worth of Tesla Megapack batteries to accelerate installations in California and Texas. Investors are betting the surge in solar and falling costs for storage will make their bets pay off...

‘It has been the hot topic over the last 24 months,’ said Michael Bonafide, director on the infrastructure and energy financing team at Deutsche Bank, which has invested in six storage deals over the last two years.”¹²⁴

Other corporations can install, own, and operate transmission-tied storage; utility

¹²³ U-21193, 7 V 2335

¹²⁴ Amrith Ramkumar, “Wall Street Wants In on America’s Battery Storage Boom”, *The Wall Street Journal*, July 17, 2024. Accessed on 7/17/2024 at: <https://www.wsj.com/business/energy-oil/wall-street-wants-in-on-americas-battery-storage-boom-861f5f1f?page=1> (there is a paywall).

ownership is not the only business model available. But the utility is in a unique position of knowing where the distribution system is stressed, which can be relieved by distribution connected storage.

Q. How could a shift of some capital investment (such as transmission-connected battery storage) from DTEE to a non-utility company be beneficial?

A. As explained by Company witness Villadsen,

“DTE Electric’s capital expenditures are higher than of the average company in the Electric Sample... A higher capital expenditure introduces relatively higher fixed costs, which cannot readily be eliminated should circumstances change. Thus, all else equal, higher capital expenditures increases business risk?”¹²⁵

Witness Villadsen also explained how more risk requires a higher cost of capital:

“The cost of capital is defined as the expected rate of return in capital markets on investments of equivalent risk. Cost of capital theory illustrates the direct relationship between risk and the expected rate of return – the higher the risk, the higher the cost of capital required.”¹²⁶

This cost of capital is then passed on to ratepayers.

Q. What should the Commission do regarding DTEE’s plans for the deployment of 275 MW of BESS capacity?

A. The Company has not yet made a specific proposal on the next 275 MW of BESS to be operational by 2028. By the time they make a specific proposal in an official filing, it may be too late to direct the Company to make a different plan. Therefore, the Commission should direct the Company to carefully consider the benefits of installing future BESS capacity in smaller, distribution-connected units, and that any future BESS

¹²⁵ Direct testimony of Bente Villadsen, pg. 44, lines 17 - 22

¹²⁶ Ibid, pg. 7, lines 19 - 22

1 proposal should include an analysis of opportunities for distribution-connected BESS,
2 and why that option was, or was not, selected by the Company.

3
4 **VIII. DTEE'S PROPOSAL ON OUTAGE CREDITS RECOVERY**

5 **Q. What did the Company propose regarding the recovery of credits for service**
6 **outages?**

7 A. The Company's proposal had four parts:¹²⁷

8 1. That outage credits paid for exceeding the duration limit would be recoverable if the
9 outage was caused by an error of the transmission operator or other utility, public
10 interference, or animal interference.

11 2. That outage credits paid to customers for exceeding the frequency limits would be
12 recoverable if the outage was caused by weather.

13 3. That recovery would be deferred.

14 4. That a percentage of the outage credits due to outage frequency would be recoverable,
15 based on the percentage of outages that were due to recoverable causes.

16 **Q. How did the Company justify recovering the credits paid due to excessively frequent**
17 **outages blamed on weather?**

18 A. With the statement:

19 "The rationale is that the Company controls the restoration time when
20 there is a weather event but not the frequency with which weather events
21 occur."¹²⁸

¹²⁷ Direct testimony of A. F. Crozier, pg. AFC-32 through AFC-34

¹²⁸ Direct testimony of A. F. Crozier, p AFC-33, lines 12-13

1 **Q. Do you see any issues with the logic expressed in DTEE’s statement on why weather-**
 2 **related outage credits should be recoverable?**

3 A. Yes, two.

4 1. The statement presumes that every outage with a weather-related cause-code is
 5 unavoidable, which is not true.

6 2. A weather cause-code is overly vague. Weather is omnipresent. If DTEE equipment
 7 overheats, that *could* be blamed on hot weather. If DTEE equipment cracks due to
 8 freezes, that *could* be blamed on cold weather. If poles rot or fall over, that *could* be
 9 blamed on wet weather. If a tree falls on the lines, that *could* be blamed on wind; even
 10 if it results from poor tree trimming practices.

11 **Q. How are outages caused by weather avoidable?**

12 A. Through effective tree trimming programs and through grid hardening.

13 **Q. Can the Company reduce the frequency of weather-related outages through tree**
 14 **trimming?**

15 A. Yes, Company witness Steudle has testified that this is true:

16 “Historically, tree-caused outages accounted for two-thirds of the time that
 17 customers spent without power. The Company’s Tree Trimming Program
 18 *reduces the frequency* of tree contact with the distribution system,
 19 mitigating impact. The ongoing, successful execution of this program
 20 allows DTEE to continuously improve the overall reliability of electric...
 21 A robust Tree Trimming Program improves system reliability, including a
 22 *reduction of the volume and duration of outages*, wire-downs, and other
 23 non-outage trouble events.”¹²⁹ (emphasis added)

¹²⁹ Direct testimony of R. C. Steudle, page RCS-5, lines 2-5 and 10-12

1 The Company says that tree-trimming reduces the frequency of tree contact, and the
 2 volume of outages. The Company provides statistics showing that tree trimming reduces
 3 “outage events” (that’s frequency) by 54% in the first post-trim year.¹³⁰

4 **Q. Can the Company reduce the frequency of weather-related outages through grid**
 5 **hardening?**

6 A. Yes, Company witness Crozier testified that:

7 “...the Company’s 4.8 kV Hardening program has led to a *61% reduction*
 8 *in frequency of outages* (SAIFI) on hardened circuits compared to non-
 9 hardened circuits.”¹³¹ (emphasis added)

10 Company witness Andahazy testified that:

11 “... the customers on hardened circuits experienced a 38% improvement
 12 in All-Weather SAIFI, while the control group circuits degraded by 23%,
 13 resulting in a net improvement of 61% for hardened circuits.”¹³²

14
 15 **Q. Can the Company reduce the frequency of weather-related outages through pole-top**
 16 **maintenance and modernization (PTMM)?**

17 A. Yes, Company witness Andahazy testified that:

18 “Overhead equipment failures cause approximately 25% of all outages
 19 customers experience during all weather conditions... Poles and pole-top
 20 equipment are some of the most critical and visible parts of the
 21 distribution and subtransmission grid, and are continually exposed to harsh
 22 conditions (e.g., tree strikes, ice, heat, rain, lightning, sunlight, and wind),
 23 causing them to degrade, weaken, and fail over time.”¹³³

¹³⁰ Ibid, p RCS-9

¹³¹ Direct testimony of A. F. Crozier, pg. AFC-12, lines 6-8

¹³² Direct testimony of M. Elliott Andahazy, pg. MEA-25, lines 2-4

¹³³ Ibid, pg. MEA-29, lines 11 - 17

1 Note that “weather” degrades equipment. Using the Company’s logic that they can’t
 2 control the weather, one *could* argue that equipment failures of old, outdoor equipment
 3 that cause outages are really the result of weather, which should be recoverable.

4 **Q. Can the Company reduce the frequency of weather-related outages through**
 5 **operational redundancy?**

6 A. Yes, Company witness Anadahazy testified that service lost due to substation failures can
 7 be restored by “switching load to adjacent substations with available jumpering
 8 capacity.”¹³⁴

9 **Q. Can the Company reduce the frequency of weather-related outages by improving**
 10 **circuits with frequent outages (CEMI)?**

11 A. Yes, Company witness Anadahazy testified:

12 “Although weather is variable year to year and can impact comparisons of
 13 circuit performance, Figure 20 shows that customers on circuits where
 14 Frequent Outage (CEMI) work was performed experienced a 35.2%
 15 improvement in All Weather SAIFI and a 14.0% improvement in All
 16 Weather SAIDI when comparing 2023 to 2022.”¹³⁵

¹³⁴ Ibid, pg. MEA-56, line 2

¹³⁵ Ibid, pg. MEA-81, lines 1 - 4

1 **Q. Are there other ways that the Company can reduce the frequency of weather-related**
 2 **outages?**

3 A. Yes, the Company's filing also talks about cable replacement,¹³⁶ Undergrounding cable,¹³⁷
 4 replacing breakers with modern reclosers,¹³⁸ replacement of some wood poles with steel
 5 poles,¹³⁹ using SCADA pole-to-pole devices,¹⁴⁰ etc. There are numerous ways that the
 6 Company can reduce the frequency with which weather causes customer outages. The
 7 Company's claim that the frequency of such outages is outside the Company's control is
 8 contradicted by broad swaths of the Company's own filing in the instant case.

9 **Q. How should the Commission react to the Company's proposal to recover the cost of**
 10 **customer outage credits resulting from weather-related outage frequency?**

11 A. The Commission should soundly reject it, sticking to the very limited list of outage causes
 12 that warrant recovery, enumerated in its order in U-20386:

13 "However, it is reasonable that the company have the ability to recover
 14 outage credits when the outage was caused by customer negligence or the
 15 transmission system operator..."¹⁴¹

16 The Commission should not allow the Company to expand this well-reasoned list of causes
 17 into the proposed vaguely defined exception for outages caused by "weather."
 18

¹³⁶ Ibid, pg. MEA-83 through MEA-92

¹³⁷ Ibid, pg. MEA-92 through MEA-100

¹³⁸ Ibid, pg. MEA-100 through MEA-105

¹³⁹ Ibid, pg. MEA-111 through MEA-112

¹⁴⁰ Ibid, MEA-113 through MEA-114

¹⁴¹ U-20386, Commission order dated November 11, 2022, page 366

1 **IX. RECOMMENDATIONS**

2 **Q. What actions should the Commission take in this case?**

3 A. I offer the following recommendations:

4 The Commission should direct the Company to redesign both commercial pilot rates (C1.11 and
5 D14) to recover the same amount of revenue from energy-capacity rates, but recover all of
6 it during the peak rate time periods. The Commission should direct the Company to file the
7 adjusted rate schedules, within 60 days of the order in the instant case, for ex parte
8 approval. The Commission should also direct the Company to include in its next rate case,
9 a discussion of the pros and cons of making a TOU rate structure the default, standard rate
10 structure for all secondary voltage commercial customers, and to collect metrics of success
11 of the pilots to prepare for making them the default standard rate.

12 • .

13 • The Commission should direct the Company, in its next rate or demand response case, to
14 propose a robust pilot of a critical-peak-rebate program, structured like those I have
15 described in this testimony. If the Company resists, the Commission should create the
16 opportunity for a third-party aggregator to do so.

17 • The Commission should direct the Company, in its next rate or demand response case, to
18 propose a robust grid-interactive water heater pilot program. If the Company resists, the
19 Commission should create the opportunity for a third-party aggregator to do so.

20 • The Commission should direct the Company, in its next rate case or demand response case,
21 to propose a pilot of geo-targeted incentives for customer-owned distributed energy
22 systems (including batteries).

- 1 • The Commission should direct the Company to carefully consider the benefits of installing
2 future BESS capacity in smaller, distribution-connected units, and that any future BESS
3 proposal should include an analysis of opportunities for distribution-connected BESS, and
4 why that option was, or was not, selected by the Company.
- 5 • The Commission should soundly reject DTEE's proposal to recover outage credits
6 resulting from outages caused by weather. Instead, the Commission should approve the
7 recovery of outage credits only from the very limited list of outage causes enumerated in
8 its order in U-20386, that warrant recovery.

9 **Q. Does that conclude your testimony?**

10 **A. Yes.**

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the Application of	)	
DTE ELECTRIC COMPANY	)	
for authority to increase rates, amend	)	Case No. U-21534
its rate schedules and rules governing the	)	
distribution and supply of electric energy, and	)	
<u>for miscellaneous accounting authority.</u>	)	

DIRECT TESTIMONY AND EXHIBIT
OF
ROBERT RAFSON

On Behalf of
Great Lakes Renewable Energy Association

July 26, 2024

1 **I. QUALIFICATIONS**

2 **Q. Please state your name and business address?**

3 **A.** My name is Robert Rafson, and my business address is 1310 11th Street, Muskegon, MI
4 49441.

5 **Q. On whose behalf are you testifying?**

6 **A.** I'm testifying on behalf of the Great Lakes Renewable Energy Association ("GLREA").
7 I am a member of GLREA Regulatory Affairs Committee and a ratepayer of Consumers
8 Energy. I am also the owner of Chart House Energy, LLC, a renewable energy
9 development company.

10 **Q. What is the GLREA?**

11 **A.** The GLREA is a 501(c)(3) (non-profit) corporation based in Michigan. GLREA's Mission
12 Statement is to "Promote the Use of Renewable Energy in Michigan and in the Great Lakes
13 Region, By Empowering Our Members and the Public Through Advocacy, Education and
14 Strategic Collaboration. GLREA's vision statement is: "We believe that current and
15 emerging clean, renewable energy solutions can provide 100% of the electrical energy
16 demand in the Great Lakes Region. Furthermore, we believe that increasing development
17 and access to clean, renewable energy that is locally produced, operated and utilized,
18 supports economic development, creates new good paying jobs and is essential to
19 supporting healthier, more resilient communities that advance climate justice."

20 **Q. What is Chart House Energy, LLC?**

21 **A.** Chart House Energy ("Chart House") is a renewable energy development firm focusing
22 on solar photovoltaic ("PV") resources and some energy efficiency measures. Chart

1 House built the first commercial system under Consumers' EARP program in June 2010,
2 then the largest PV project in Michigan at the time. Chart House also built the then
3 largest PV system in Iowa at the time as well as many larger commercial sized solar PV
4 systems throughout Michigan and a few other places around the state and Midwest.

5 Chart House comes from an economically distressed community. Chart House recruits,
6 trains and hires from low- and moderate-income ("LMI") populations throughout the
7 state. Chart House in partnership with the City of Ypsilanti won honorable mention (4th
8 place of 141 teams) U.S. Department of Energy ("USDOE") SunShot Solar in Your
9 Community Challenge where we have trained LMI people in Ypsilanti, Detroit, West
10 Bloomfield, Muskegon, and will be undertaking such training in Flint, Muskegon Heights
11 and other communities. The training includes actual installs and pays workers a living
12 wage. After the installation, we assist trainees to obtain permanent construction jobs,
13 some with PV installers and the rest with other construction companies. We believe that
14 renewable energy jobs provide the transition from under- or un-employment to good
15 paying construction jobs for people who have traditionally been left out of the
16 construction industry. This constitutes another important part of the transformational
17 change created by renewable energy deployment.

18 **Q. Please describe your educational background.**

19 A. I received a Bachelor of Science degree in Mechanical Engineering from the University
20 of Wisconsin-Madison and a Professional Engineering License in Wisconsin, Illinois and
21 Michigan. I also have received North American Board of Certified Energy Practitioner
22 ("NABCEP") certification as a certified PV designer and installer.

1 **Q. Please describe your relevant business experience.**

2 A. I have been a Brownfield Developer for more than 25 years and started installing
3 renewable energy and energy efficiency measures on my buildings for roughly 15 years
4 ago. In 2009, I started Chart House Energy and have developed more than 5 MW of solar.
5 In addition, I participated in the MPSC value of solar, Distributed Generation, IRP,
6 distribution and other workgroups and have become an expert witness in MPSC cases on
7 behalf of GLREA.

8 **Q. Are you sponsoring an exhibit with your direct testimony?**

9 A. Yes. I have prepared and am sponsoring **Exhibit GLREA-2 (RR-1)**, Resume of Robert
10 Rafson.

11 **Q. Was this exhibit prepared by you or at your direction?**

12 A. Yes.

13 **Q. Have you previously presented testimony before the Michigan Public Service**
14 **Commission (“MPSC” or the “Commission”)?**

15 A. Yes. I have testified in the following cases:

16 U-18091 DTE PURPA

17 U-20162 DTE rate case

18 U-20165 Consumers Energy IRP

19 U-20471 DTE’s IRP.

20 U-20359 I&M rate case

21 U-20591 I&M IRP

1 U-20836 DTE rate case
 2 U-21090 Consumers Energy IRP
 3 U-21172 DTE VGP case
 4 U-21224 Consumers Energy rate case

5 **II. DIRECT TESTIMONY**

6 **A. THE COMMISSION SHOULD ADDRESS DTE'S DEFICIENT OUTAGES**
 7 **RECORD**

8 **Q. How is DTE ranked for outages in the CUB 2023 Utility Performance Report?**

9 A. DTE is ranked as the #1 worse investor-owned utility in the country in outage length.¹

10 **Q. According to the CUB, what is the average time DTE takes to restore outages and**
 11 **how does that compare with other states in Midwest and US average?**

12 A. CAIDI with Major Event days (minutes):

13 527 DTE
 14 140 Illinois
 15 211 Indiana
 16 185 Ohio
 17 116 Minnesota
 18 307 Wisconsin
 19 315 US average
 20

21 DTE takes 2.75 times longer to restore power than the other Midwest utilities and nearly
 22 twice the national average.

¹ CUB Utility performance report page 6,
https://drive.google.com/file/d/1aNPXl1nvrlZPyxo70cWNKFi_-TsOpmQF/view

1 **Q. How does the American Society of Civil Engineers (ASCE) rank Michigan’s Grid?**

2 A. They rank Michigan’s grid a “D”, indicating “poor, at risk”². The national average is not
3 much better at “C-“.

4 **Q. Do we expect to have more outages?**

5 A. According to Climate Central, between 1958 and 2016 precipitation has increased by 42%
6 and experts project that these numbers will increase 40% more by the end of the century.

7 **Q. Do outages last longer in low-income communities?**

8 A. According to the Center for Disease Control, a 1% drop in socioeconomic status results in
9 waiting 170 minutes longer on average to restore power.³

10 Electricity is essential to just about everyone – rich or poor, old or young. Failure by DTE
11 to provide this essential is dramatically obvious. In 2023, there were three major outages
12 that lasted 3, 5 and 10 days. Not all of these outages relate to weather. As the ASCE
13 indicated, Michigan’s electrical grid is “poor” and “at risk”. This puts people at risk for
14 this essential service.

15 **Q. What regulatory actions can be undertaken to address outages in electric service?**

16 A. Several options exist to protect customers and their property from DTE’s failure to provide
17 stable reliable power and all of them require producing power during the outage, such as:

18 Backup generators

19 Battery backups

² <https://planetdetroit.org/2024/01/michigan-ranks-2-among-states-for-power-outages/>

³ <https://www.governing.com/infrastructure/power-outages-leave-poor-communities-in-the-dark-longer#:~:text=A%201%2Ddecile%20drop%20in,restored%2C%20and%20sometimes%20much%20longer.>

1 Bi-directional EV (V2H) options

2 According to DOE, there are over 12 million backup generators installed in the United
3 States with over 200 GW and growing at 5 GW/yr.⁴ If we divide this by 50 states, we can
4 estimate 240,000 in Michigan and about 5 GW of generation capacity, with about one-half
5 in DTE territory. DTE has 2.3 million customers and 120,000 backup generators, which
6 means that only 5% of customers have backup generators as protection against outages.

7 **Q. How much do backup generators cost?**

8 A. According to Forbes,⁵ on average \$9,000 including installation. This is too expensive for
9 most low-income customers.

10 **Q. How much does battery backup cost?**

11 A. NREL in 2022 report indicated that typical battery storage systems cost \$16,000⁶ (based on
12 5 kW / 12.5 kWh) This is even more expensive and out of reach for low-income
13 customers.

14 **Q. Is V2H (Bi-directional EV charging) available?**

15 A. Yes, but just recently. Many if not most 2026 or 2027 EV models will be able to provide
16 backup power to residential homes. For now, we can count this out as only a few makes and
17 models allow for whole home back up. Also, few if any low-income persons can afford a
18 Ford Lightening EV truck (\$57,000 to \$95,000) or GMC Hummer EV (about \$100,000).

⁴ https://netl.doe.gov/sites/default/files/Smartgrid/Value-of-Standby-Generation-08-29-08-AZ--2-APPROVED_2008_09.pdf

⁵ <https://www.forbes.com/home-improvement/electrical/generator-cost-guide/>

⁶ https://atb.nrel.gov/electricity/2023/residential_battery_storage

1 **Q. Why is this important to low-income communities?**

2 A. Other than the obvious essential need for reliable power for all customers, critical services
3 require reliable power. Hospitals and emergency services have long had backup
4 generators. But in low-income communities, these services along with food pantries and
5 soup kitchens provide many critical services. If CUB's reported outages averaging 527
6 minutes in DTE territory and the CDC numbers are correct, low income customers are
7 likely to experience an average of 697 minutes (11.6 hours) in outages.

8 According to the Food and Drug Administration, commercial kitchens must dispose of
9 food once food is above 40° F for more than 4 hours. With DTE outages averaging more
10 than 8 hours and likely closer to 12 hours, food pantries and soup kitchens have had to
11 dispose of all of their refrigerated and frozen food multiple times each year because of
12 these outages.

13 **B. THE COMMISSION SHOULD ENCOURAGE THE DEVELOPMENT OF**
14 **MICRO-GRIDS TO INCREASE THE RELIABILITY AND RESILIENCE**
15 **OF DTE'S SYSTEM**

16 **Q. Are there solutions to provide backup power to small areas?**

17 A. Microgrids could mitigate damage caused by outages by providing power to small areas
18 from distributed generation and/or battery storage during broader outages. A microgrid for
19 a single property is called a nanogrid. Nanogrids are increasingly popular amongst
20 customers installing distributed generation (especially solar). According to Wood
21 Mackenzie⁷, in 2022 nationally 11% of residential distributed generation installations

⁷ <https://www.woodmac.com/news/opinion/distributed-solar-plus-storage-holds-potential/#:~:text=Solar%2Dplus%2Dstorage%20is%20growing,paired%20with%20batteries%20in%202022.>

1 (solar) and 5.3% non-residential installs included batteries . They also report that the
2 numbers of batteries being installed is rapidly increasing, doubling from 2019 to 2022 as
3 battery prices continue to fall.

4 Nanogrids can become the hub of micro-grids allowing neighbors to share in stable power.
5 With the growing number and severity of outages, this becomes even more important.

6 **Q. Are customers with nanogrids already supporting their neighbors?**

7 A. Yes. Service providers that have backup power are able to service people in need. But
8 also I know of nanogrid owners that have run extension cords to their neighbors to keep
9 their homes lighted, and their refrigerators and heaters running in winter outages.

10 **Q. What recommendation do you offer the Commission on this issue?**

11 A. The Commission should formally allow nanogrid customers to connect to their neighbors.
12 With DTE being worst in the country at restoring after an outage, some action needs to be
13 taken to allow people to help their neighbors.

14 **Q. What could be the advantages on the grid by allowing customers to expand their**
15 **nanogrids?**

16 A. 1) Localized generation:
17 a) decrease demand on distribution thus delaying or eliminating infrastructure
18 investment thus decreasing all customer costs.
19 b) increasing renewable energy resources to achieve state and federal targets
20 which will decrease the investments required by the utilities thus decreasing all
21 customer costs.

2) Energy storage:

a) localized energy storage allows more of the power generated to be consumed in the microgrid area, further decreasing demand on the distribution grid, thus decreasing all customer costs by delaying or eliminating infrastructure investments.

b) provision of grid services

i) firming the grid during high demand periods thus creating high quality power for all customers

ii) improving localized power quality in and outside of the microgrid locally.

c) provision and maintenance of power supply to serve essential loads even when the main grid is down.

i) by decreasing load on the local distribution network during brownouts or other outages, the microgrid generation can help to avoid or mitigate brownouts, especially during peak load events. This would improve service for all customers and help improve the utilities service record which is the worst in the nation. Every solution to improve DTE's outage performance should be implemented.

d) better matching of DTE generation with load on the distribution network.

i) helping DTE to match load and local generation will assist responses to ever changing generation mixes.

1 ii) by matching load with generation in and outside of the microgrid, DTE
2 will need to invest less in battery storage to meet the needs of all
3 customers, thus resulting in decreased costs for DTE and in lower rates for
4 all customers.

5 3) Islanding capabilities:

6 a) both DTE and Consumers have programs with customers that have back
7 up generation to “island” customers to enable them to take their load off the grid
8 during peak periods. This non-wired alternative has been successful for both
9 DTE and Consumers to decrease peak capacity demands, thus decreasing capacity
10 requirements and deferring or eliminating generation purchases, thus decreasing
11 all customers costs.

12 b) islanding the microgrid will decrease the load on the local grid during
13 an outage, thus decreasing the restart load requirement so as to increase resiliency
14 and decrease outage time.

15 c) islanding microgrid resources can help the connected customers to
16 maintain power essential to their lives when DTE fails to provide reliable,
17 resilient, stable power.

18 d) islanding microgrid resources can allow customers to provide critical
19 service facilities to provide shelter and critical services to their communities when
20 DTE fails to provide stable power, not just during weather emergencies but also
21 when DTE’s frail and failing infrastructure gives out.

22 4) Energy management and control:

1 a) advanced energy management and control would optimize generation,
2 storage and consumption on the local network to provide optimal matching of
3 load to generation within the microgrid to provide lower costs to microgrid
4 customers.

5 b) advanced microgrid controls can provide both distribution and
6 transmission level services to the utility.

7 c) advanced microgrid controls are adaptable to ever changing grid
8 dynamics and future grid loads and generation mixes thus helping the utility to
9 adapt to future changes

10 d) microgrids and energy management and controls can help utilities with
11 future generation and distribution planning as the microgrids can provide
12 dispatchable capacity to help the utility to match load and generation in ever more
13 variable generation mixes. The grid of the future may have critical need for this
14 support.

15 5) Grid interaction and flexibility: Microgrids can interact and exchange power with
16 the main grid, leveraging two-way communication and smart grid technologies. They
17 can import or export electricity based on pricing signals, grid conditions, or specific
18 operational strategies. This interaction enhances grid flexibility, enables demand
19 response capabilities, and allows microgrids to contribute to grid stability and support
20 overall grid management.

21 6) Resilience and reliability: Microgrids enhance resilience and reliability by
22 diversifying energy sources and reducing dependence on a single central power plant.

1 Their localized nature and ability to operate independently during grid disruptions
2 ensure a more secure power supply for critical facilities like hospitals, military bases,
3 or remote communities.

4 7) Energy efficiency and sustainability: Microgrids often prioritize energy
5 efficiency, by using combined heat and power (CHP) systems, waste heat recovery,
6 and advanced energy management techniques. By optimizing energy consumption, and
7 reducing transmission losses associated with long-distance power delivery, microgrids
8 contribute to overall energy efficiency and sustainability goals.

9 8) Integration of electric vehicles: Microgrids can integrate electric vehicle
10 charging infrastructure and smart charging capabilities. This allows for the efficient
11 charging of EVs, the utilization of EV batteries for grid services or energy storage,
12 and the potential for vehicle-to-grid interactions, where EVs can feed electricity back
13 into the microgrid or main grid during peak demand periods.

14 Microgrids offer a range of benefits, including improved reliability, increased resilience,
15 enhanced energy efficiency, integration of renewable energy sources, and the ability to
16 operate autonomously. They are particularly relevant in remote areas, campuses, industrial
17 complexes, or areas prone to grid outages or limited grid access, where they provide
18 reliable and sustainable energy solutions tailored to specific local needs.”⁸

19 Ultimately, Microgrids can help DTE to provide a lower cost, more resilient and reliable
20 grid, and better power quality. Microgrids and nanogrids allow customers to provide their

⁸ <https://www.edisonenergy.com/blog/the-advantages-of-microgrids/>

1 own essential power when DTE fails to provide power for thousands of minutes a year.

2 **Q. Are there other benefits that microgrids can provide to DTE's distribution**
3 **network?**

4 A. Beyond the services and support that renewable energy, batteries, and back up generation
5 can provide, microgrids and nanogrids can decrease the number of meters, drops and
6 transformers that are needed. If microgrid owners submeter with neighbors (as utilities
7 presently allow for large industrial customers) then DTE may have fewer customers. This
8 will decrease the number of customers DTE needs to bill and in low-income areas will also
9 reduce the burden of collections.

10 **Q. What recommendations and requests to you have for the Commission?**

11 A. The Commission should specifically allow nanogrids and microgrids. Nanogrid (behind
12 the meter) installations of any combination of backup generators, solar and energy storage
13 facilities, EV charging (including bi-directional EV charging) technology, and other
14 demand response controls allow customers to provide for themselves reliable, potentially
15 renewable, energy and can help to ensure that they have the essential power they need.
16 GLREA requests the Commission to allow neighbors to expand and share their nanogrids.
17 This can result in resilient hubs that can assure that customers have the essential power
18 they need, and can potentially provide grid services to DTE and the transmission company
19 if the scale is large enough.

20 This regulatory step is particularly justified as a response to DTE's failure to serve
21 essential power to their customers and most critically to low-income community
22 customers, whose services are the last to be restored after outages and reside in areas that

1 receive the least maintenance and upgrades, often making them the first to have power
2 outages. In short, the Commission should allow customers to help themselves and their
3 neighbors.

4 **Q. Does this complete your testimony?**

5 **A. Yes, it does.**

1 MR. KESKEY: That would complete GLREA's
2 case, your Honor.

3 JUDGE WALLACE: O.K. All right. Off the
4 record for a minute.

5 (At 12:32 p.m., brief off-record discussion.)

6 JUDGE WALLACE: O.K. Mr. Orris, please
7 take it away.

8 MR. ORRIS: Thank you, your Honor.

9 JUDGE WALLACE: Are we back on the
10 record?

11 COURT REPORTER: Yes.

12 JUDGE WALLACE: We are back on the
13 record. O.K. Forget that. Please go a ahead,
14 Mr. Orris. Sorry about that.

15 MR. ORRIS: Staff moves to bind in the
16 Direct Testimony of Justin Hecht, consisting of a cover
17 sheet and eight pages of qualifications, questions, and
18 answers. Staff also moves to admit the sponsored
19 exhibits for Mr. Hecht, which are S-2 Schedule B1, S-2
20 Schedule B4, and Exhibit S-11.

21 JUDGE WALLACE: Is there any objection to
22 binding in the testimony of Mr. Hecht?

23 Hearing none, the testimony is bound in.

24 I'm going to go ahead and admit the
25 entire exhibit. Is there any objection to the admission

1 of Exhibit S-2? Is there any objection to the admission
2 of Exhibit S-11? Hearing none, those exhibits are
3 admitted.

4 (Testimony bound in.)

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S T A T E O F M I C H I G A N
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the Application of	)	
DTE ELECTRIC COMPANY	)	
for authority to increase its rates, amend	)	Case No. U- 21534
its rate schedules and rules governing the	)	
distribution and supply of electric energy, and	)	
<u>for miscellaneous accounting authority.</u>	)	

QUALIFICATIONS AND DIRECT TESTIMONY OF
JUSTIN J. HECHT
MICHIGAN PUBLIC SERVICE COMMISSION

1 Q. Please state your name and business address.

2 A. My name is Justin J. Hecht and my business address is 7109 West Saginaw
3 Highway, Lansing, MI 48917.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission ("MPSC" or
6 "Commission") as an auditor in the Revenue Requirements section of the
7 Regulated Energy Division.

8 Q. Please briefly describe your educational background and other professional
9 qualifications.

10 A. I earned a Bachelor of Business Administration Degree in Accounting from
11 Northwood University in 2014. In February 2023, I completed the National
12 Association of Regulatory Utility Commission ("NARUC") Rate Case Basics
13 course. In November 2023, I completed the Institute of Public Utilities ("IPU")
14 Advanced Regulatory Accounting and Auditing course.

15 Q. Please describe your professional background.

16 A. I was previously employed at Andrews Hooper Pavlik, PLC as a staff accountant,
17 from November 2014 through September 2017, where I performed tax
18 preparation and audits of financial institutions. I was previously employed at
19 Berthiaume & Company, CPAs as an in-charge auditor, from October 2017
20 through January 2023, where I performed audits of governmental and nonprofit
21 entities. I began my employment with the MPSC in February 2023 as an auditor
22 in the Rate Base Unit of the Regulated Energy Division. My current
23 responsibilities include, but are not limited to, performing rate case audits using

1 the financial and operating records of regulated utilities, applicable laws,
 2 regulations, and Commission policies to determine the necessity of rate relief.

3 Q. Briefly discuss your involvement with the MPSC cases.

4 A. I have performed audit work in the following cases:

<u>Case Number</u>	<u>Company</u>	<u>Case Type</u>
U-21366	MGU	Gas Rate Case
U-21297	DTE Electric Company	Electric Rate Case
U-21389	Consumers Energy Co.	Electric Rate Case
U-21412	I&M Power Company	Depreciation Rate Case
U-21461	I&M Power Company	Electric Rate Case
U-21384	DTE Gas Company	Depreciation Rate Case
U-21291	DTE Gas Company	Gas Rate Case
U-21540	MGU	Gas Rate Case

14 Q. Have you previously sponsored testimony before the Michigan Public Service
 15 Commission?

16 A. Yes. I have sponsored testimony in the following cases:

<u>Case Number</u>	<u>Company</u>	<u>Case Type</u>
U-21297	DTE Electric Company	Electric Rate Case
U-21389	Consumers Energy Co.	Electric Rate Case
U-21461	I&M Power Company	Electric Rate Case
U-21291	DTE Gas Company	Gas Rate Case
U-21540	MGU	Gas Rate Case

1 Q. What is the purpose of your testimony?

2 A. The purpose of my testimony is to present the MPSC Staff's ("Staff") projected
3 total rate base for the 12-month period ending December 31, 2025, ("projected
4 test year") in the instant DTE Electric Company ("DTE" or the "Company")
5 electric rate case. Additionally, I will be supporting adjustments to the Company's
6 projected depreciation and amortization expense and property tax expense,
7 presented on Staff Exhibit S-3, Schedule C1.1, sponsored by Staff witness
8 Nichols.

9 Q. Are you sponsoring any exhibits in this proceeding?

10 A. Yes, I am sponsoring the following exhibits:

11 S-2 Schedule B1: Projected Rate Base for Test Year Ending 12/31/25

12 S-2 Schedule B4: Projected Working Capital for Test Year Ending 12/31/25

13 S-11.0 Company Response to MPSC Staff Audit Request JJH-1

14 Q. Were these exhibits prepared by you or under your direction?

15 A. Yes.

16 **RATE BASE**

17 Q. What is the total rate base being presented by Staff in the instant case for the
18 projected test year?

19 A. Referring to Staff Exhibit S-2, Schedule B1, Line 16, Column (e), Staff presents a
20 total projected rate base of \$21,967,013,000.

This is a decrease of \$140,976,000 from the Company's \$22,107,989,000 projection presented on Exhibit A-12, Schedule B1, Line 16, Column (d), in its initial filing. Below, my testimony will address the individual components resulting in the \$140,976,000 reduction to the Company's filed projected rate base.

Total Utility Plant

Q. What is the total utility plant being presented by Staff for the projected test year?

A. Referring to Exhibit S-2, Schedule B1, Line 6, Column (e), Staff presents a projected total utility plant of \$27,285,015,000. This is a decrease of \$143,540,000 from the Company's \$27,428,555,000 projection presented on Exhibit A-12, Schedule B1, Line 6, Column (d), in its initial filing.

Q. Please explain the \$143,540,000 decrease.

A. The \$143,540,000 decrease is the corresponding impact to plant in service resulting from Staff adjustments to the Company's historic and projected capital expenditures. A summary of those adjustments and the Staff witness supporting each is illustrated in Figure 1 below.

FIGURE 1*		Total	Test Year Impacts From Historic and Projected Capital Spend Adj				
(\$000)		Cap Ex	Plant	Accum. Depr.	Net Rate Base	Depreciation	Property Tax
		Increase / (Decrease)	Increase / (Decrease)	Increase / (Decrease)	Increase / (Decrease)	Increase / (Decrease)	Increase / (Decrease)
Staff Witness	Adjustment Description						
Kindschy	Production Plant - Steam	(66,053)	(50,873)	(1,373)	(49,500)	(1,638)	-
Kindschy	Production Plant - MERC / Fuel Supply	(103)	(103)	(8)	(95)	(3)	(3)
DeCooman	Production Plant - Other	(14,683)	(4,773)	(133)	(4,640)	(103)	(81)
Kindschy	Production Plant - Nuclear	(45,550)	(37,463)	(1,502)	(35,961)	(1,597)	-
DeCooman	Distribution	(14,420)	-	-	-	-	(10)
Matthews	Demand Side Management	(2,000)	(1,700)	(310)	(1,390)	(340)	(15)
Rogers	Information Technology	(58,565)	(47,548)	(9,845)	(37,703)	(8,507)	-
Fromm	Corporate Staff	(1,440)	(1,080)	(68)	(1,012)	(82)	(8)
	TOTAL	(202,814)	(143,540)	(13,238)	(130,301)	(12,270)	(117)

*Source - WP-JJH-1

1 **Depreciation Reserve**

2 Q. What is the depreciation reserve amount being presented by Staff for the projected
3 test year?

4 A. Referring to Exhibit S-2, Schedule B1, Line 7, Column (e), Staff presents a
5 projected depreciation reserve of \$6,764,051,000. This is a decrease of
6 \$13,238,000 from the Company's \$6,777,289,000 projection presented on Exhibit
7 A-12, Schedule B1, Line 7, Column (d), in its initial filing.

8 Q. Please explain the \$13,238,000 decrease?

9 A. The \$13,238,000 decrease is the corresponding impact to the depreciation reserve
10 resulting from Staff adjustments to the Company's historic and projected capital
11 expenditures (refer to Figure 1 on page 4 of my testimony).

12 **Working Capital**

13 Q. What is the projected test year working capital being presented by Staff?

14 A. Referring to Staff Exhibit S-2, Schedule B4, Line 76, Column (g), Staff presents a
15 projected working capital of \$1,284,697,000. This is a decrease of \$10,675,000
16 from the Company's \$1,295,372,000 projection presented on Exhibit A-12, B4,
17 Line 76, Column (c), in its initial filing.

1 Q. Please explain the \$10,675,000 decrease.

2 A. The \$10,675,000 decrease is the result of two adjustments made by Staff and are
3 as follows. First, line 11, Other Accounts Receivable, was reduced by \$6,111,000.
4 I will discuss this adjustment in my testimony below. Second, line 34, Reg Asset
5 – Charging Forward, was reduced by \$4,564,000 which is the corresponding
6 impact from Staff Witness Freeman’s Charging Forward recommendations in his
7 direct testimony.

8 Q. Please explain your adjustment to reduce line 11, Other Accounts Receivable, in
9 the amount of \$6,111,000.

10 A. Staff Exhibit S-11.0 is a response from the Company asserting that \$6,111,000 of
11 the balance within other accounts receivable should be considered non-
12 recoverable. The Company notes it should be considered non-recoverable in rates
13 since it relates to non-utility balance. Therefore, I’ve made an adjustment to
14 reduce other accounts receivable by this amount.

15 **DEPRECIATION AND AMORTIZATION EXPENSE ADJUSTMENTS**

16 Q. The Company provides a projected test year amount for depreciation and
17 amortization expense of \$1,266,245,000 on its Exhibit A-13, Schedule C1, in its
18 initial filing, is that correct?

19 A. Yes.

20 Q. What adjustments to the Company projected depreciation expense are you
21 supporting?

1 A. I am supporting an adjustment on Exhibit S-3, Schedule C1.1, Line 43, Column
2 (j), sponsored by Staff witness Nichols, to decrease the Company's projected
3 depreciation expense by \$12,270,000 to \$1,253,974,000.

4 Q. Please explain the \$12,270,000 decrease?

5 A. The \$12,270,000 decrease is comprised of the corresponding impacts on
6 depreciation and amortization expense resulting from Staff adjustments to the
7 Company's historic and projected capital expenditures (refer to Figure 1 on page
8 4 of my testimony).

9 **PROPERTY TAX EXPENSE ADJUSTMENT**

10 Q. What adjustment to the Company's test year projected property tax expense are
11 you supporting?

12 A. I am supporting an adjustment on Exhibit S-3, Schedule C-1.1, Line 43, Column
13 (j), sponsored by Staff witness Nichols, to decrease the Company's test year
14 projection by \$117,000.

15 Q. Please explain the \$117,000 reduction.

16 A. The \$117,000 reduction is the corresponding impact on property tax expense
17 resulting from Staff's adjustments to the Company's historic and projected capital
18 expenditures (refer to Figure 1 on page 4 of my testimony).

19 Q. Why did you incorporate this adjustment as part of the test year impacts resulting
20 from Staff's adjustments to the Company's historic and projected capital
21 expenditures?

1 A. The Company's projected property tax expense is developed, in part, by using its
2 projected tax liability. The projected tax liability is derived from historic and
3 projected capital expenditures. Since Staff is recommending capital expenditure
4 reductions, a corresponding adjustment is needed to decrease the projected test
5 year property tax expense.

6 Q. Does this conclude your testimony?

7 A. Yes.

1 MR. ORRIS: Staff also moves to bind in
2 the direct testimony of David Isakson, consisting of a
3 cover sheet and nine pages of qualifications, questions,
4 and answers. Mr. Isakson had also sponsored the
5 following exhibits: S-6 Schedules F2, F3, F4, F5, and
6 F8.

7 JUDGE WALLACE: O.K. Is there any
8 objection to binding in the testimony of Mr. Isakson?

9 Hearing none, the testimony is bound in.

10 Is there any objection to the admission
11 of Exhibit S-6, inclusive of all schedules?

12 Hearing none, that exhibit is admitted.

13 (Testimony bound in.)

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STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the Application of	)	
DTE ELECTRIC COMPANY	)	
for authority to increase its rates, amend	)	Case No. U-21534
its rate schedules and rules governing the	)	
distribution and supply of electric energy, and	)	
<u>for miscellaneous accounting authority.</u>	)	

QUALIFICATIONS AND DIRECT TESTIMONY OF
DAVID W. ISAKSON
MICHIGAN PUBLIC SERVICE COMMISSION

1 Q. Please state your name, address, and current position.

2 A. My name is David W. Isakson (he/him/his). My business address is 7109 West
3 Saginaw Hwy, Lansing, Michigan 48917. I am currently employed by the
4 Michigan Public Service Commission (MPSC or Commission) in the Rates and
5 Tariff Section of the Regulated Energy Division as a Departmental Analyst.

6 Q. Would you briefly describe your educational background?

7 A. I earned a B.S. in economics from Central Michigan University in 2008. In 2011,
8 I completed an M.A. in economics at Central Michigan University.

9 Q. Have you attended any seminars or other training courses?

10 A. Yes. In August 2012, I completed the National Association of Regulatory Utility
11 Commissioners (NARUC) Annual Regulatory Studies Program held at Michigan
12 State University. I attended the AEIC Advanced Load Research Seminar in
13 October 2012, and the Electric Cost of Service Study and Electric Utility Pricing
14 courses hosted by EUCI in July 2019.

15 Q. What are your responsibilities in your current position?

16 A. I participate in rate, tariff amendment, reconciliation, integrated resource plan
17 (IRP), special contract, *ex parte* tariff, and other cases under the supervision of the
18 Rates and Tariff manager. My work involves performing electric rate design, gas
19 rate design, and tariff analysis. My duties also involve performing research in
20 special topics such as rate benchmarking, load research, demand response, and the
21 economics of public utility regulation.

22 Q. Have you previously presented testimony in cases before the MPSC?

23 A. Yes, I have presented testimony in the following cases:

	<u>MPSC Case</u>	<u>Company</u>	<u>Work Description</u>
1			
2	U-17437	DTE Electric Company	PLD Transition Plan
3	U-17643	Consumers Energy Company	Gas Rate Design
4	U-17761	DTE Electric Company	PLD Trans. Reconciliation
5	U-17767	DTE Electric Company	Electric Rate Design
6	U-17999	DTE Gas Company	Gas Cost of Service Study
7	U-18014	DTE Electric Company	Electric Rate Design
8	U-18124	Consumers Energy Company	Gas Cost of Service Study
9	U-18322	Consumers Energy Company	Electric Rate Design
10	U-18424	Consumers Energy Company	Gas Cost of Service Study
11	U-18999	DTE Gas Company	Gas Cost of Service Study
12	U-20102	Consumers Energy Company	Electric TCJA Credit A
13	U-20103	Consumers Energy Company	Gas TCJA Credit A
14	U-20134	Consumers Energy Company	Electric Rate Design
15	U-20165	Consumers Energy Company	IRP- Demand Response (DR)
16	U-20287	Consumers Energy Company	Gas TCJA Credit B
17	U-20286	Consumers Energy Company	Electric TCJA Credit B
18	U-20309	Consumers Energy Company	TCJA Calculation C
19	U-20322	Consumers Energy Company	Gas Cost of Service Study
20	U-20471	DTE Electric Company	IRP - DR
21	U-20479	SEMCO Energy Gas Company	ASP Revenue
22	U-20561	DTE Electric Company	Electric Rate Design
23	U-20642	DTE Gas Company	Gas DR

1	U-20650	Consumers Energy Company	Gas DR, Tariffs
2	U-20940	DTE Gas Company	R&D Expense
3	U-20963	Consumers Energy Company	Electric Rate Design
4	U-21080	Consumers Energy Company	DR Reconciliation
5	U-21148	Consumers Energy Company	Renewable Natural Gas
6	U-21224	Consumers Energy Company	Electric Rate Design
7	U-21297	DTE Electric Company	Electric Rate Design
8	U-21389	Consumers Energy Company	Electric Rate Design
9	U-21540	Michigan Gas Utilities Corporation	Gas Cost of Service Study

1 Q. What is the purpose of your testimony?

2 A. The purpose of my testimony is to present MPSC Staff's (Staff's) present
3 revenue, electric rate design, and tariff recommendations.

4 Q. Are you sponsoring any exhibits?

5 A. Yes, I am sponsoring the following exhibits:

6 Staff Exhibit S-6, Schedule F2, "Staff Summary of Present and Proposed
7 Revenue."

8 Staff Exhibit S-6, Schedule F3, "Staff Present and Proposed Revenue by Rate
9 Schedule."

10 Staff Exhibit S-6, Schedule F4, "Staff Comparison of Monthly Bills."

11 Staff Exhibit S-6, Schedule F5, "Staff Calculation of Voltage Level Distribution
12 Charges."

13 Staff Exhibit S-6, Schedule F8, "Staff Proposed Tariff Sheet Corrections."

14

15 **Present Revenue**

16 Q. What is Staff's recommended present revenue?

17 A. Due to Staff's adjustments to the Company's residential income assistance and
18 senior citizen credit customer counts, sponsored by Staff witness Elaina
19 Braunschweig, Staff recommends a present revenue of \$5,564,537,000 versus the
20 Company's \$5,561,302,000. A higher present revenue has the effect of lowering
21 the revenue deficiency. Detail of Staff's present and proposed revenues can be
22 found on Staff Exhibit S-6, Schedule F2.

23

Electric Rate Design

Q. Please describe the general procedure that Staff uses to perform its rate design.

A. Following the review of the Company's testimony and exhibits, the general procedure for performing rate design begins in evaluating the Company's rate design model in Microsoft Excel. This evaluation involves verifying each of the several hundred present rates hardcoded into the model, as well as all other hardcoded input data such as rate of return on rate base. Staff compares present rates in the rate design model to those in the Company's Commission-approved rate book, while other data is audited to its original source such as Company exhibits or witness testimony. Next, Staff evaluates the billing determinants for each rate schedule to determine their reasonableness. Staff then analyzes the functions or formulae used in the model to ensure they are calculating rates and other information correctly or as expected and intended. If and when Staff discovers errors or discrepancies, Staff submits audit requests to the Company for further explanation. Once Staff is confident in the state of Company's model, and after other Staff experts have compiled adjustments to the revenue requirement, sales forecast, and the cost of service study (COSS), Staff incorporates the outputs from those models into the rate design model as the last step in the overall rate calculation process. Finally, Staff adjusts the rate design model to incorporate any new rate design proposals recommended by Staff followed by a final check of all functions, hardcoded data, and model outputs before filing to ensure the rates Staff proposes will generate Staff's recommended revenue requirement.

Rate Impact

Q. What is the total impact of all of Staff's recommendations in this case on rates?

A. Incorporating all of Staff's recommendations, from individual account adjustments to its recommended rate of return, results in an overall increase of 4.3% over present rates. Further detail on the exact impacts of Staff's recommended rates on customer bills can be found in Staff Exhibit S-6, Schedule F4.

Q. What is the impact of Staff's revenue requirement, COSS, and rate design on residential rates?

A. Staff's rate design results in an overall increase of 5.2% over present residential rates.

Q. What is the impact of Staff's revenue requirement, COSS, and rate design on general service secondary rates?

A. Staff's rate design results in an overall increase of 5.1% to general service secondary rates.

Q. What is the impact of Staff's revenue requirement, COSS, and rate design on primary rates?

A. Staff's rate design results in an overall increase of 1.3% to primary rates.

Q. What is the impact of Staff's revenue requirement, COSS, and rate design on streetlighting rates?

A. Staff's rate design results in an overall increase of 3.5% to streetlighting rates.

1 **Tariffs**

2 Q. What are Staff's recommendations regarding corrections to the Company's
3 proposed tariffs?

4 A. Staff discovered several errors in the Company's proposed and presently-
5 approved tariffs. These errors range from errant punctuation to spelling mistakes
6 and are listed in Staff Exhibit S-6, Schedule F8. Maintaining legible, error-free
7 tariffs is paramount to give customers confidence that the rates they are charged
8 and the rules under which they take service have been thoroughly vetted and
9 considered. Staff recommends that the Commission approve final tariffs with
10 corrections shown in Staff Exhibit S-6, F8.

11 Q. Does Staff support the Company's proposal to eliminate the tariff sheets for Rates
12 D1-A and D1-B?

13 A. Yes. Company witness Aaron Willis recommends removing the tariffs for
14 residential Rates D1-A and D1-B because those rates are now obsolete.¹ Rates
15 D1-A and D1-B were previously used to study time-of-use enrollment and pricing
16 for the Company's Advanced Customer Pricing Pilot (ACPP) in the lead up to
17 transitioning all residential customers to time-differentiated rates. The ACPP has
18 been completed; and, thus, those rates are no longer needed. The removal of their
19 associated tariffs will shorten and uncomplicate the Company's rate book.

20 Q. What does Staff recommend regarding the Company's proposal to retire
21 residential Rate D1.6?

¹ Direct testimony of Company witness Willis, p 46, lines 5-8.

1 A. Staff recommends that the Commission approve the Company's proposal to retire
 2 Rate D1.6 and make the Low Income Assistance (LIA) credit available to all
 3 residential rates. This proposal would allow customers receiving the LIA to take
 4 service on a variety of rates, including Time of Use (TOU) rates, which may
 5 better suit them. This is the same treatment that the Commission has authorized
 6 for Consumers Energy Company's residential Low-Income Assistance Credit,
 7 which is akin to the Company's LIA credit in scale, availability, and eligibility.
 8 The Company provided an analysis, as requested by the Commission, which
 9 showed that thousands of customers would be better off on the default residential
 10 Rate D1.11 than on the current inverted-block rate design of D1.6.² If the
 11 Commission does not approve the Company's proposal to make the LIA credit
 12 available on all residential rate schedules, then those customers would not be able
 13 to take advantage of lower-cost off-peak rates.

14 **Recommendations Summary**

15 Q. Please summarize your recommendations.

16 A. Staff's recommendations are as follows:

- 17 1. Staff recommends the Commission approve Staff's electric rate design.
- 18 2. Staff recommends the Commission approve its tariff error corrections.
- 19 3. Staff recommends the Commission approve the Company's proposal to
 20 remove tariff sheets for residential Rates D1-A and D1-B.

² Direct testimony of Company witness Aaron Willis, p 24, Table 1.

1 4. Staff recommends the Commission approve the Company's proposal to
2 open availability of the LIA credit to all residential base rates, transition D1.6
3 customers to D1.11, and eliminate Rate D1.6 by the end of the test year.

4 Q. Does this conclude your direct testimony?

5 A. Yes, it does.

1 MR. ORRIS: Mr. Isakson also filed
2 rebuttal testimony, consisting of a cover sheet and 12
3 pages of questions and answers. Staff moves to have that
4 bound into the record.

5 JUDGE WALLACE: Is there any objection to
6 binding in the rebuttal testimony of Mr. Isakson?

7 Hearing none, the testimony is bound in.

8 (Testimony bound in.)

9 - - -

S T A T E O F M I C H I G A N
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the Application of	)	
DTE ELECTRIC COMPANY	)	
for authority to increase its rates, amend	)	Case No. U-21534
its rate schedules and rules governing the	)	
distribution and supply of electric energy, and	)	
<u>for miscellaneous accounting authority.</u>	)	

REBUTTAL TESTIMONY OF
DAVID W. ISAKSON
MICHIGAN PUBLIC SERVICE COMMISSION

1 Q. Are you the same David W. Isakson who sponsored direct testimony on behalf of
2 Michigan Public Service Commission (MPSC) Staff (Staff) in the instant case?

3 A. Yes.

4 Q. What is the purpose of your rebuttal testimony?

5 A. In my rebuttal testimony I will provide Staffs response and recommendations
6 regarding the direct testimony of the following parties' witnesses: Great Lakes
7 Renewable Energy Association (GLREA); Clean Energy Organizations (CEO)¹;
8 Detroit Area Advocacy Organizations (DAAO)²; MNSC³; CUB, MEC, and
9 NRDC⁴; and the City of Ann Arbor (Ann Arbor).

10

11 **GLREA**

12 **Demand response critical peak rebate (CPR) pilot**

13 Q. GLREA witness John Richter recommends that the Company should propose a
14 CPR pilot in its next rate case or demand response (DR) reconciliation case.⁵

15 Does Staff have any concerns about CPR rates?

16 A. Yes. CPR rates typically produce less per customer demand reduction than
17 dynamic peak pricing (DPP) rates. A DPP rate, like the Company's Rate D1.8, is
18 basically the inverse of a CPR. Rather than offer a bill credit for load reduction
19 during an event a DPP rate has a very high energy charge during peak events. The

¹ CEO is made up of the Ecology Center, the Environmental Law & Policy Center, the Union of Concerned Scientists, and Vote Solar.

² DAAO is made up of Soulardarity and We Want Green, Too.

³ MNSC is made up of Michigan Environmental Council, Natural Resources Defense Council, Sierra Club, and Citizens Utility Board of Michigan.

⁴ Citizens Utility Board of Michigan, Michigan Environmental Council, and Natural Resources Defense Council.

⁵ Direct testimony of GLREA witness John Richter, p 46, lines 2-5.

1 two key differences between the rates are that a CPR measures load reduction
2 against a baseline, which must be imputed on historic usage data, and the cost of
3 bill credits for CPR get spread to all customers. DPP rates on the other hand offset
4 the very high peak event energy charge with a rate discount for all off-peak hours.
5 CPR customers are rewarded with a bill credit for load reductions during peak
6 events, whereas DPP customers are rewarded during off-peak hours. A DPP rate
7 is effectively a more extreme time-of-use (TOU) rate with a variable peak day.
8 This is all to say that excess revenue created during the peak event offsets the
9 discount on a DPP rate, making the load reduction effectively revenue neutral for
10 all power supply customers. Meanwhile all customers must pay for the bill credits
11 of CPR customers because there is no offsetting charge in its design. This has the
12 effect of making CPR rates both less effective for demand reduction and at a
13 greater cost than the alternative DPP rate. Staff's concern does not mean the
14 Commission should reject GLREA witness Richter's proposal, but instead Staff is
15 providing additional context to the discussion of whether or not CPR rates are a
16 worthwhile endeavor. GLREA witness Richter provided a list of other utilities
17 across the country that offer CPR rates but did not include details on those
18 programs' cost effectiveness. Should the Commission approve GLREA witness
19 Richter's proposal for the Company to propose a CPR rate then the Commission
20 should also carefully consider its cost effectiveness.

21
22
23 **CEO**

Regression analysis

- Q. Should the Commission rely on the regression analysis provided by CEO witness Boratha Tan when making determinations in the instant case?
- A. No. As mentioned by CEO witness Tan, the Company, CEO, and Staff have been meeting and working on a regression analysis of customer demographics and reliability.⁶ Rather than dispute the veracity of CEO witness Tan's regression analysis Staff recommends that the Commission rely on the product of Staff, CEO and the Company's joint effort of creating a statistically reasonable and informative regression analysis.

DAAO

Eliminating Rate D1.6

- Q. If the Commission denies the Company's proposal to eliminate Rate D1.6 should the low-income assistance (LIA) credit and its associated tariff language be made available to all other residential rate schedules?⁷
- A. Yes. Closing Rate D1.6 and making the LIA credit available to customers on all residential rates are separate issues. The Commission need not approve the entirety of the Company's proposal regarding D1.6, though Staff recommends the Commission do so. DAAO witness Jackson Koeppel recommends that the Commission reject the Company's proposal to retire Rate D1.6 and also require the Company to provide another analysis of the potential impacts of TOU rates

⁶ Direct Testimony of CEO witness Boratha Tan, p 6, line 3 through p 7, line 12.

⁷ Direct Testimony of Company witness Aaron Willis, p 25, lines 6-11.

1 for low-income customers.⁸ However, in his description of the Company's
 2 proposal to transition current Rate D1.6 customers to other residential rates
 3 DAAO witness Koeppel fails to mention the fact that those customers would
 4 *continue to receive the \$40 per month LIA credit on their new rates.*⁹ This is only
 5 made possible by updating the tariffs for all other residential rates as proposed by
 6 Staff witness Elaina Braunschweig.¹⁰

7 For these reasons and those provided in my direct testimony¹¹ Staff
 8 recommends that the Commission approve the Company's proposal to make the
 9 LIA credit available on all residential base rate schedules, transition Rate D1.6
 10 customers to the default residential Rate D1.11, and retire Rate D1.6.

11 MNSC

12 Rate design

13
 14 Q. Is MNSC witness Douglas Jester correct in his description of the Company's
 15 residential and commercial electric heating rates?

16 A. No. MSNC witness Jester avers that the Company currently offers residential and
 17 commercial electric heating rates, but that those rates are not a substitute for
 18 conducting a class cost of service study (COSS)¹² with separate classes for multi-
 19 family and electric space heating customers. MSNC witness Jester describes these
 20 rates as mostly interruptible, requiring separate metering, or only available for

⁸ Direct Testimony of DAAO witness Jackson Koeppel, p 40, lines 11-16.

⁹ Direct Testimony of DAAO witness Jackson Koeppel, p 34, lines 5-13.

¹⁰ Direct Testimony of Staff witness Elaina Braunschweig, p 9, lines 1-35.

¹¹ Direct Testimony of Staff witness David Isakson, p 8, lines 1-13.

¹² Utility Cost of Service Study (UCOS), Class Cost of Service Study (CCOSS), and Cost of Service Study (COSS) are all different names for the same analysis.

1 geothermal space conditioning.¹³ Except for rate D1.7, the geothermal space
2 conditioning rate, MSNC witness Jester's description of electric space heating
3 rates is not accurate.

4 Q. Please describe Rate D2.

5 A. Rate D2 is the residential electric space heating rate and is the only one of its kind
6 in the Company's service offering. That rate is not interruptible and does not
7 require a separate meter. Rate D2 is already separate from other residential
8 customers in the COSS, and thus offers some degree of insight into the costs
9 caused and recovered by electric heating customers. The rate does not include any
10 time-of-use (TOU) pricing mechanisms but does have seasonal capacity charges.
11 Rate D2 is also notable in that it charges much less per kWh of power supply
12 (\$0.0708/kWh) compared to the standard residential Rate D1.11 (\$0.0922/kWh),
13 or the more comparably designed non-transmitting meter Rate D1
14 (\$0.0938/kWh). Electric heating requires a substantial amount of energy for space
15 heating, so the average total bill on Rate D2 is still higher than for other
16 residential customers despite the disparity in prices. Rate D2 has been closed to
17 new customers since December 17, 2015.

18 Q. What does Staff recommend regarding MNSC witness Jester's recommendation
19 that the Company be required to submit an alternative COSS that separates
20 residential customers into Multi-Family, Single-Family with electric heat, and
21 Single-Family with non-electric heat?¹⁴

¹³ Direct Testimony of MNSC witness Douglas Jester, p 25, lines 7-15.

¹⁴ Direct Testimony of MNSC witness Douglas Jester, p 28, lines 4-8.

1 A. Staff recommends that if the Commission were to approve MNSC witness Jester's
2 recommendation that the alternative COSS also separate Multi-Family residential
3 customers by heating type. This would result in a COSS that had separate
4 residential classes for:

- 5 1. Multi-family with electric space heating
- 6 2. Multi-family without electric space heating
- 7 3. Single-family with electric space heating
- 8 4. Single-family without electric space heating

9 It is not reasonable to only distinguish between method of space heating for
10 single-family customers and not multi-family if one expects to find differences
11 between those customers. If service for single-family customers and multi-family
12 customers is unlike then it is for a different reason than how service for electric
13 space heating and non-electric space heating customers is unlike.

14 Q. Please provide Staff's analysis of MNSC witness Jester's rate design changes.

15 A. The rate design changes described by MNSC witness Jester would affect the
16 different customer classes to incredibly different degrees, and it has to do with
17 how rates are structured for each class and the number of customers on each rate
18 design.¹⁵ The changes would range from being duplicative to currently approved
19 rate design to totally upending customers' bills. It also depends on which method
20 of production plan cost allocation the Commission approves, under MNSC
21 witness Jester's proposed rate design change.

22 Q. How would MNSC witness Jester's rate design affect residential rates?

¹⁵ Direct Testimony of MNSC witness Douglas Jester, p 22, line 3 through p 23, line 7.

1 A. Under MNSC witness Jester's proposal residential rates would largely remain the
2 same save for a longer peak season and therefore shorter off season. The majority
3 of residential customers are served on the default Rate D1.11, which is a TOU
4 rate where more revenue collection is designed to happen during on-peak summer
5 periods. One of the key pillars of MNSC witness Jester's rate design is
6 seasonality, and virtually all residential customers already take service on a
7 seasonal rate. Adjusting the length of those seasons would likely not affect the
8 charges paid by customers materially. Power supply capacity charges already
9 collect less revenue than non-capacity charges so any changes to how capacity
10 revenue is collected would be much less noticeable on the customer's bill. A
11 typical customer's main price signal is their overall monthly bill, so Staff finds it
12 unlikely that a change to rate design as described by MNSC witness Jester would
13 be very effective.

14 MNSC witness Jester's proposal is not specific in how to design its
15 intended effect vis-a-vie on-peak and off-peak charges within any season.
16 Currently, the price differential between on-peak and off-peak charges is based on
17 the relative difference in locational marginal prices (LMP) for each season (i.e.
18 summer and non-summer.) Theoretically this design is meant to act as a proxy for
19 the actual changes in cost that a power supplier faces, which is in line with
20 MNSC's goal of producing price signals that match actual cost.¹⁶ In other words,
21 currently approved rate design for most residential customers likely already
22 achieves MNSC's aim. In either scenario, where the Commission adopts MNSC

¹⁶ Direct Testimony of MNSC witness Douglas Jester, p 22, lines 2-6.

1 witness Jester's 9CP method or the recommended weights of class share method
2 for allocating production plant costs, it is likely not necessary to develop a new
3 residential rate design.

4 Q. How would MNSC witness Jester's rate design changes affect commercial
5 secondary and primary customers?

6 A. Commercial secondary customers with seasonal or TOU rates would be relatively
7 unaffected for the same reasons as their residential counterparts. However,
8 customers that pay demand capacity charges, such as on Large General Service
9 Rate D-4 or the main Primary Supply Rate D-11, are not currently charged
10 seasonal rates and would therefore see the most impact of MNSC witness Jester's
11 rate design changes. Again, MNSC witness Jester does not propose to implement
12 any of its rate design changes in the instant case and instead recommends that the
13 Company propose them in its next rate case. Adopting the 9CP method and
14 charging zero or near-zero demand charges for capacity in the winter would
15 seriously skew customer bills within any given year. The affected customer's
16 winter bill would be substantially less than its bills for the remaining 9 months,
17 obviously, but charges for those remaining months would also be higher than they
18 otherwise would be for non-seasonal rates because the same revenue target would
19 need to be collected over fewer MW of demand. Rates could be designed to be
20 revenue-neutral over the duration of the test year, but seasonal differences on
21 customers' monthly bills would be significant. This is not an argument against
22 MNSC witness Jester's rate design changes. Instead, like with the transition to

1 seasonal TOU pricing for the residential class, these rate design changes should
 2 be thoroughly studied and debated before implementation.

3

4

CUB, MEC, and NRDC

5

Electric space heating COSS and rate design

6

Q. Does Staff agree with CUB, MEC, and NRDC witness David Gard that the
 7 Commission should direct the Company to provide a “robustly time-differentiated
 8 rate structure that is available to electric heating customers and to treat those
 9 customers as a separate class for the purpose of COS analysis and rate design?”¹⁷

10

A. Staff maintains the same recommendation regarding an alternative residential
 11 COSS with classes differentiated by both single vs. multi-family dwelling and by
 12 electric vs. non-electric space heating as described earlier in my rebuttal
 13 testimony. This would accomplish the goal of CUB, MEC, and NRDC witness
 14 Gard’s recommendation. On the notion of a “robust” time-differentiation in rate
 15 design Staff emphasizes that such a rate must be designed to reflect actual cost
 16 differences by season or time-of-use. Demand response rates such as residential
 17 Rate D1.2 are designed to encourage load shifting to off-peak hours, but a default
 18 rate design for all residential customers with electric space heating must be based
 19 on some measure of cost difference (i.e. residential Rate D1.11’s reliance on
 20 differences in LMP.) By law DR rates must be voluntary, which is why the design
 21 and justification for default (i.e. not voluntary) rates must be cost-based.¹⁸

¹⁷ Direct Testimony of CUB, MEC, and NRDC witness David Gard, p 11, lines 11-13.

¹⁸ MCL 460.1095 (1) (a).

1 Q. What does Staff recommend?

2 A. Staff recommends that if the Commission approves CUB, MEC, and NRDC
3 witness Gard's recommendation to create a "robust" electric space heating rate
4 design that said design be based on actual cost differences during seasonal or
5 time-of-day time periods.

6

7 **Ann Arbor**

8 **Streetlighting LED conversion credits**

9 Q. Ann Arbor witness Cyrus Naheedy thinks that Ann Arbor should get a credit on
10 its bill equal to the monies other customers will not have to pay to convert Ann
11 Arbor's streetlights.¹⁹ Does Staff agree?

12 A. No. Ann Arbor witness Naheedy does not find it fair that Ann Arbor will pay up
13 front to convert to LEDs but not receive any recognition that it has relieved other
14 customers of paying for Ann Arbor's conversion costs.²⁰ As described by MI-
15 MAUI witness Richard Bunch, if all customers will begin to be upgraded to LED
16 service via spending in base rates, then it is appropriate for customers that paid
17 CIAC on their conversions to be made whole.²¹ Staff argues that MI-MAUI's
18 proposed remedy of a bill credit would assuage Ann Arbor witness Naheedy's
19 concerns regarding making customers whole for early conversion to LED service.
20 For this reason Staff recommends that the Commission approve MI-MAUI's

¹⁹ Direct Testimony of Ann Arbor witness Cyrus Naheedy, p 9, lines 6-7.

²⁰ Direct Testimony of Ann Arbor witness Cyrus Naheedy, p 9, lines 3-6.

²¹ Direct Testimony of MI-MAUI witness Richard Bunch, p 25, lines 9-14.

1 streetlighting conversion credit proposal and reject Ann Arbor witness Naheedy's
2 recommendations regarding a specific credit for Ann Arbor.²²
3

4 **Recommendations Summary**

5 Q. Please summarize your recommendations.

6 A. Staff's recommendations are as follows:

7 1. Staff recommends that if the Commission approves GLREA witness
8 Richter's proposal to require the Company to propose a critical peak rebate pilot
9 in its next case, that the Commission scrutinize the cost effectiveness of the
10 proposal.

11 2. Staff recommends that the Commission approve the Company's proposal
12 to make the low-income assistance credit available on all base residential rates,
13 transition customers from Rate D1.6 to Rate D1.11, and retire Rate D1.6. Staff
14 recommends that the Commission treats those three steps separately in its
15 determination regarding Rate D1.6.

16 3. Staff recommends that the Commission disregard CEO witness Tan's
17 regression analysis and instead use the collaborative regression analysis
18 conducted by CEO, Staff, and the Company when it becomes available.

19 4. Staff recommends that if the Commission approves MNSC witness
20 Jester's recommendation to require the Company to provide a cost of service
21 study with separate residential classes for single-family dwelling, multi-family

²² Direct Testimony of MI-MAUI witness Richard Bunch, p 29, lines 1-4

1 dwelling, and electric space heating that the Commission should also split the
2 multi-family dwelling class by heating type.

3 5. Staff recommends that if the Commission approves CUB, MEC, and
4 NRDC witness Gard's recommendation to direct the Company to create a robust
5 electric space heating rate that said rate must be cost-based.

6 6. Staff recommends that the Commission reject Ann Arbor witness
7 Naheedy's proposal for streetlighting conversion credits and approve MI-MAUI's
8 proposal for streetlighting conversion credits instead.

9 Q. Does this conclude your rebuttal testimony?

10 A. Yes, it does.

11

1 MR. ORRIS: Staff moves to bind in the
2 Direct Testimony of Theresa McMillan-Sepkoski, consisting
3 of a cover sheet and 11 pages of qualifications,
4 questions, and answers. Ms. McMillan Sepkoski also
5 sponsored Exhibits S-7.0 and S-7.1, S-7.2, S-7.3, S-7.4,
6 and S-7.5.

7 JUDGE WALLACE: All right. Is there any
8 objection to binding in the testimony of
9 Ms. McMillan-Sepkoski?

10 Hearing none, the testimony is bound in.

11 Is there any objection to the admission
12 of Exhibits S-7.0 through S-7.5?

13 Hearing none, those exhibits are
14 admitted.

15 (Testimony bound in.)

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STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

✿ ✿ ✿ ✿

**In the matter of the application of)
DTE ELECTRIC COMPANY)
for authority to increase its rates, amend)
its rate schedules and rules governing the)
distribution and supply of electric energy, and)
for miscellaneous accounting authority.)**

Case No. U-21534

**QUALIFICATIONS AND DIRECT TESTIMONY OF
THERESA MCMILLAN-SEPKOSKI
MICHIGAN PUBLIC SERVICE COMMISSION**

1 Q. Please state your name and business address.

2 A. My name is Theresa L. McMillan-Sepkoski. My business address is 7109 West
3 Saginaw Hwy, Lansing MI, 48917.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission (MPSC or
6 Commission) as an Audit Specialist in the Revenue Requirements Section of the
7 Regulated Energy Division.

8 Q. What is your educational background?

9 A. I graduated in 1981 from Mott Community College with an A.A.S. degree in
10 Accounting with a minor in Business Management. In June 2006, I graduated
11 from Baker College with highest honors and a B.B.A. degree with emphasis in
12 Accounting. Since becoming employed here at the Commission, I have
13 participated in numerous MPSC training sessions and attended the National
14 Association of Regulatory Utility Commissioners (NARUC) Advanced
15 Regulatory Studies Program.

16 Q. Please describe your professional background.

17 A. Prior to my employment at the MPSC, I worked in accounting in the public and
18 private sector for sixteen years after receiving my associate degree. I began my
19 employment at the Shiawassee County Health Department as an Accounts
20 Processor. From there my experience in accounting came from working for
21 Federal Forge Inc., also known as Bharat Forge Ltd. from an entry level position
22 in Accounts Payable and promoted to Controller. After that I worked for CSI Inc.
23 as an Assistant Controller/Human Resource Administrator. In December 2006,

1 having completed my bachelor's degree, I began my employment with the
2 Michigan Public Service Commission and have continued through the present.

3 Q. Briefly discuss your experience with the MPSC.

4 A. I have served as the lead auditor, case coordinator, and performed audit work in
5 many types of cases for the MPSC. The types of cases have been gas and electric
6 rate cases, Power Supply Cost Recovery (PSCR) and Gas Cost Recovery (GCR)
7 reconciliation cases, Cooperative Times Interest Earned Ratio (TIER) review
8 cases, and various tracking mechanism cases. I have also testified before the
9 Commission on previous Revenue Requirement rate cases.

10 Q. Have you previously filed testimony before the MPSC?

11 A. Yes, I have filed testimony in the following cases:

12 U-15190 – Consumers Energy Company Gas Rate Case

13 U-15244 – Detroit Edison Company Electric Rate Case

14 U-15245 – Consumers Energy Company Electric Rate Case

15 U-15506 – Consumers Energy Company Gas Rate Case

16 U-16034-R – Wisconsin Electric Power Co. 2010 PSCR Reconciliation

17 U-16149-R – Consumers Energy Co. 4/10 – 3/11 GCR Reconciliation

18 U-16424-R – Wisconsin Electric Power Co. 2011 PSCR Reconciliation

19 U-17095-R – Consumers Energy Co. 2013 PSCR Reconciliation

20 U-17130-R – Michigan Gas Utilities Corporation 4/13 - 3/14 GCR Reconciliation

21 U-17133-R – Consumers Energy Co. 4/13 – 3/14 GCR Reconciliation

22 U-17317-R – Consumers Energy Co. 2014 PSCR Reconciliation

23 U-17334-R – Consumers Energy Co. 4/14 – 3/15 GCR Reconciliation

1	U-17691-R – DTE Gas 4/15 – 3/16 GCR Reconciliation
2	U-18124 – Consumers Energy Co. Gas Rate Case
3	U-18250 – Consumers Energy Co. Securitization Case
4	U-20134 – Consumers Energy Co. Electric Rate Case
5	U-20162 – DTE Electric Rate Case
6	U-20276 – Upper Peninsula Power Co. Electric Rate Case
7	U-20322 – Consumers Energy Gas Rate Case
8	U-20479 – SEMCo Energy Gas Co. Gas Rate Case
9	U-20561 – DTE Electric Rate Case
10	U-20642 – DTE Gas Rate Case
11	U-20650 – Consumers Energy Gas Rate Case
12	U-20697 – Consumers Energy Electric Rate Case
13	U-20940 – DTE Gas Rate Case
14	U-20963 – Consumers Electric Rate Case
15	U-21148 – Consumers Gas Rate Case
16	U-20836 – DTE Electric Rate Case
17	U-21224 – Consumers Electric Rate Case
18	U-21286 – Upper Peninsula Power Company Electric Rate Case
19	U-21291 – DTE Gas Rate Case
20	U-21297 – DTE Electric Rate Case
21	U-21308 – Consumers Gas Rate Case
22	U-21389 – Consumers Electric Rate Case
23	U-21461 – I&M Electric Rate Case

1		U-21490 – Consumers Gas Rate Case
2		U-21540 – Michigan Gas Utilities Corporation Gas Rate Case
3		U-21555 – Upper Peninsula Power Co. Electric Rate Case

1 Q. What is the purpose of your testimony?

2 A. The purpose of my testimony is to present the Michigan Public Service
3 Commission Staff's (Staff) adjustments to DTE Electric Company's (the
4 Company or DTE) projected Employee Incentive Compensation Plan (EICP),
5 Restricted Stock, Regulated Marketing O&M expense, and Merchant Fees O&M
6 expense included in Operations and Maintenance (O&M) expense for the test year
7 ending December 25, 2025.

8 Q. Are you sponsoring any exhibits in this proceeding?

9 A. Yes, I am sponsoring the following exhibits:

10 Exhibit Title

11 S-7.0 Co. Response TMS-1.1a Incentive Compensation

12 S-7.1 Incentive Compensation Company Witness Cooper Table 3

13 S-7.2 DTE Energy Co Long-Term Incentive Plan Booklet

14 S-7.3 Co. Response TMS-2.1a Restricted Stock

15 S-7.4 Regulated Marketing O&M Expense Updated with 2023 Actuals

16 S-7.5 Merchant Fees O&M Expense Updated with 2023 Actuals

17 **Employee Incentive Compensation Plan (EICP) Expense**

18 Q. Please describe DTE Electric's EICP.

19 A. DTE's EICP is a component of the Company's variable pay programs to both
20 executive and non-represented employees. There are three programs included in
21 EICP: 1) the Annual Incentive Plan (AIP), which is a short-term program
22 available to senior management level personnel; 2) the Rewarding Employees
23 Plan (REP), which is identical to AIP except that the threshold performance

1 percentage is different; and 3) the Long-Term Incentive Plan (LTIP), which
2 provides an incentive payout to certain individuals in the form of DTE Energy
3 common stock. These programs are related to financial and non-financial
4 performance objectives.

5 Q. What is the Company's projected expense for EICP?

6 A. The Company projected \$59,504,000 in Company witness Cooper's testimony,
7 page 62, Table 3, for the projected test-year ending December 31, 2025, with
8 \$39,232,000 related to the achievement of financial performance measures
9 and \$20,271,000 related to non-financial operating objectives (See Staff Exhibit
10 S-7.1).

11 Q. Has the Commission provided a decision on EICP in previous rate cases?

12 A. Yes. Commission decisions to exclude incentive compensation related to
13 financial measures from the revenue requirement in preceding rate cases were
14 founded on two premises. First, the Commission found that incentive
15 compensation plans that were tied to Company earnings and cash flow were
16 financial considerations that largely benefited shareholders and should not be paid
17 for by ratepayers. See MPSC Case No. U-14347, Opinion and Order, December
18 22, 2005, p 35. Second, the Commission has found that long-term incentive
19 compensation is tied closely to company earnings and cashflow that benefits the
20 shareholders more than the ratepayers. See MPSC Case No. U-17735, Order,
21 November 19, 2015, p 78. In MPSC Case No. U-17767, Order, December 11,
22 2015, pgs. 76-77, the Commission found there was insufficient evidence to
23 conclude that the financial measures for short term incentives (AIP and REP)

1 showed significant benefit to ratepayers. Most recently in MPSC Case No. U
2 20561, Order, May 8, 2020, pg. 19, the Commission has disallowed any
3 capitalized amounts of incentive compensation that are based upon financial
4 measures to be included in rates. The following are more recent cases in which
5 financially measured incentive compensation has been excluded from the revenue
6 requirement by the Commission:

7 - Case No U-17735, 11/19/2015 Order, (Consumers Energy electric rate case)

8 -Case No. U-18124, 7/31/17 Order, (Consumers Energy gas rate case)

9 -Case No. U-18322, 3/29/18 Order, (Consumers Energy electric rate case)

10 -Case No. U-18999, 9/13/18 Order (DTE Gas Company gas rate case)

11 -Case No. U-20162, 5/2/19 Order (DTE Electric Company rate case)

12 -Case No. U-20322, 9/26/19 Order (Consumers Energy gas rate case)

13 -Case No. U-20561, 5/8/20 Order (DTE electric rate case)

14 -Case No. U-20697, 12/17/20 Order (Consumers Energy electric rate case)

15 -Case No. U-20940, 12/9/21 Order (DTE gas rate case)

16 -Case No. U-20963, 12/22/21 Order (CE electric rate case)

17 -Case No. U-21297, 12/1/23 Order (DTE Electric rate case)

18 Q. What is Staff's understanding of the Commission's policy for EICP expenses?

19 A. The Commission has excluded capitalized and O&M incentive compensation
20 expense that is based upon financial performance measures from the revenue
21 requirement on the basis that shareholders specifically benefit from financial
22 performance measures such as return on equity and cash flow, whereas ratepayers

1 specifically benefit from non-financial measures related to reliability and
2 customer satisfaction.

3 Q. What is Staff's recommendation regarding the Company's request for inclusion of
4 EICP expense in this case?

5 A. Staff recommends the Commission find the inclusion of the EICP for non-
6 financial performance measures in the amount of \$20,271,000 (Staff Exhibit S-
7 7.0) is reasonable. Staff recommends that the \$39,232,000 of EICP related to the
8 achievement of financial performance measures should be disallowed.

9 **Restricted Stock**

10 Q. Please describe the Restricted Stock included in the revenue requirement.

11 A. The Company states in Staff Exhibit S-7.2 that LTIP is awarded with Restricted
12 Stock or performance shares. Both awards are based on DTE Energy Company
13 stock prices, which is a financial measure used by the Company to determine the
14 amount of the award. Restricted Stock is considered as a reward to employees for
15 assisting the Company in reaching its financial performance goals. See Staff
16 Exhibit S-7.2, pages 2-3 of 8. Per Company response Staff Exhibit S-7.3, the
17 amount of compensation in the form of Restricted Stock included in the revenue
18 requirement is \$8,960,000. The Company indicated this amount was included in
19 the projected test period.

20 The Commission has repeatedly disallowed any portion of compensation related
21 to financial measures to be included in the revenue requirement. In MPSC Case
22 Nos. U-20561, Order, May 8, 2020, pgs. 202-203, and U-20836, Order,

1 November 18, 2022, pgs. 302-303, U-21297, Order, December 1, 2023, pgs. 238-
2 239, the Commission agreed with the recommendation of the ALJ that Staff
3 correctly analyzed the Restricted Stock as an expense that should be excluded.

4 Q. Please explain Staff's recommended disallowance for Restricted Stock.

5 A. Since the Commission has repeatedly disallowed any portion of compensation
6 related to financial measures to be included in the revenue requirement, Staff is
7 recommending a disallowance of Restricted Stock in the amount of \$8,960,000.

8 **Regulated Marketing O&M Expense**

9 Q. Please describe the Regulated Marketing O&M expense.

10 A. Regulated marketing includes major account services to the C&I customer
11 classes, electric marketing education campaigns, economic development of local
12 economic growth, the Demand Response portfolio, the Charging Forward O&M
13 expenses, and the Charging Forward regulatory assets amortization.

14 Q. Has the Company included regulated marketing O&M expense in the revenue
15 requirement of the current case?

16 A. Yes. The Company has included \$32,154,000 for regulated marketing O&M
17 expense in the revenue requirement per Company Exhibit A-13, Schedule C5.9.

18 Q. Please describe Staff's recommendations in the current case.

19 A. The Company projected regulated marketing O&M expense based on 2022 actual
20 amounts, which projected a test year expense of \$32,154,000. (Exhibit A-13,
21 Schedule C5.9), line 15. Staff's adjustment used the updated 2023 actuals and
22 Replaced the Company's inflation rates with Staff's inflation rates of 2.9% and
23 2.9% for 2024 and 2025, respectively. By updating the base year and adjusting

1 for Staff inflation rates, Staff's adjustment reduces the corporate services O&M
2 expense by \$292,000, for a total regulated marketing O&M expense to include in
3 the revenue requirement of \$31,862,000. (Exhibit S-7.4). Staff recommends the
4 ALJ and the Commission disallow \$292,000 for regulated marketing O&M
5 expense.

6 **Merchant Fees O&M Expense**

7 Q. Please explain Merchant Fees.

8 A. When customers opt to pay their utility bill with a credit/debit card, credit card
9 companies and banks charge the Company fees to process these transactions, and
10 those fees were passed on to individual customers. DTE began taking over the
11 cost to these individual customers paying with credit/debit card by socializing
12 said costs. DTE believes that this service it refers to as Merchant Fees O&M
13 expense enhances their customers' experience and satisfaction.

14 Q. When did DTE request to have these fees socialized in a rate case?

15 A. DTE requested to have these fees eliminated for the individual customer paying
16 with a credit/debit card and socialize the costs among the rate classes approved
17 for this use in MPSC Case No. U-18255. In MPSC Case No. U-20162, the
18 Commission approved DTE prohibiting larger industrial customers and secondary
19 choice customers from using credit/debit cards in order to reduce the cost of
20 socializing the merchant fee.

21 Q. What is the Company requesting in this present case concerning Merchant Fees?

22 A. The Company is requesting \$12,296,000 for the projected test period, Company
23 Exhibit A-13, Schedule C5.7.1.

1 Q. What is Staff proposing in this case?

2 A. The Company projected merchant fees O&M expense based on 2022 actual
3 amounts, which projected a test year expense of \$12,296,000. (Exhibit A-13,
4 Schedule C5.7.1, line 4). Staff 's adjustment used the updated 2023 actuals and
5 projected forward to the test year for an amount of \$11,060,000. By updating the
6 base year actuals, Staff's adjustment reduces merchant fees O&M expense by
7 \$1,236,000. Staff recommends the ALJ and the Commission disallow \$1,236,000
8 for merchant fees O&M expense.

9 Q. Please summarize Staff's recommendations in the current case.

10 A. Staff recommends the ALJ and the Commission approve \$20,271,000 of non-
11 financial measures for EICP and disallow \$39,232,000 related to financial
12 measures. For Restricted Stock, Staff recommends a disallowance of the
13 \$8,960,000 included in the revenue requirement for the test period. Regulated
14 marketing O&M expense should be reduced by \$292,000. Merchant fees O&M
15 expense should be reduced by \$1,236,000.

16 Q. Does this conclude your testimony?

17 A. Yes, it does.

1 MR. ORRIS: Staff moves to bind in the
2 Direct Testimony of Robert F. Nichols, II, CPA,
3 consisting of a cover sheet and seven pages of
4 qualifications, questions, and answers. Mr. Nichols also
5 sponsored the following exhibits: S-1 Schedule A1, S-1
6 Schedule A1.2, S-3 Schedule C1, S-3 Schedule C1.1, S-3
7 Schedule C14, and S-3 Schedule C15.

8 JUDGE WALLACE: Is there any objection to
9 binding in the direct testimony of Mr. Nichols?

10 Hearing none, the testimony is bound in.

11 Is there any objection to the admission
12 of Exhibits S-1, inclusive of all schedules, and Exhibit
13 S-3, also inclusive of all schedules?

14 Hearing none, those exhibits are
15 admitted.

16 (Testimony bound in.)

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STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

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**In the matter of the application of
DTE ELECTRIC COMPANY
for authority to increase its rates, amend
its rate schedules and rules governing the
distribution and supply of electric energy, and
for miscellaneous accounting authority.**

Case No. U-21534

QUALIFICATIONS AND DIRECT TESTIMONY OF

ROBERT F. NICHOLS II, CPA

MICHIGAN PUBLIC SERVICE COMMISSION

1 Q. Please state your name and business address.

2 A. My name is Robert F. Nichols II, and my business address is 7109 West Saginaw
3 Highway, Lansing, MI 48917.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission (Commission or
6 MPSC) as the Manager of the Revenue Requirements Section of the Regulated
7 Energy Division.

8 Q. How long have you been employed by the MPSC and what are your duties?

9 A. I have been employed by the MPSC since November of 2011. As Manager of the
10 Revenue Requirements Section, I am primarily responsible for the planning and
11 direction of electric and gas rate case audits and presentations, as well as cases
12 involving accounting standards and requests for accounting authority. From 2011
13 through March 2016, as an Auditor within the Revenue Requirements Section, my
14 responsibilities included auditing, analyzing, and making recommendations
15 regarding utility revenues, expenses, and rate base.

16 Q. Please describe your educational background.

17 A. I graduated from Davenport University, with highest honors, in 2009 with a
18 Bachelor of Business Administration degree in Accounting Information
19 Management. I attended a regulation and ratemaking conference hosted by the
20 Michigan State University Institute of Public Utilities (MSU IPU) in May of
21 2012. In August of 2012, I attended the National Association of Regulatory
22 Utility Commissioners (NARUC) annual two-week Regulatory Studies Program
23 held at Michigan State University. Each August from 2013 through 2016 and in

1 2019, I attended the Annual Regulatory Studies Program hosted by MSU IPU. I
 2 also attended a one-week Advanced Regulatory Studies Program in fall of 2013,
 3 2014, and 2016, hosted by MSU IPU.

4 Q. Please describe your professional background.

5 A. Prior to coming to the MPSC, from 2000 to 2011, I was employed by Genesee
 6 Cut Stone & Marble Company. My duties there included sales, drafting, and
 7 estimating.

8 Q. Do you have any professional licenses?

9 A. Yes. I am a Certified Public Accountant, licensed by the State of Michigan.

10 Q. Have you prepared testimony or assisted in any other proceedings?

11 A. I have assisted or filed testimony in the following cases:

<u>Case No.</u>	<u>Company</u>	<u>Subject/Type</u>
12 U-16855	Consumers Energy Co. Gas	Rate Case
13 U-16969	SEMCO Energy Gas Company	Merger and Acquisition
14 U-16794	Consumers Energy Co. Electric	Rate Case
15 U-16999	Michigan Consolidated Gas Co.	Rate Case
16 U-16855	Consumers Energy Co. Gas	Self-Implementation Refund
17 U-17087	Consumers Energy Co. Electric	Rate Case
18 U-17197	Consumers Energy Co. Gas	Rate Case
19 U-17273	Michigan Gas Utilities Corp.	Rate Case
20 U-17274	Upper Peninsula Power Co.	Rate Case
21 U-17440	Consumers Energy Co. Electric	Self-Implementation Refund
22 U-17488	Northern States Power Co. Gas	Rate Case
23 U-16999	DTE Gas IRM	Reconciliation
24 U-17620	Consumers Energy Co.	OPEB Trust Funding
25 U-17643	Consumers Energy Co. Gas	Rate Case
26 U-17669	WPSC Electric	Rate Case
27 U-17735	Consumers Energy Co. Electric	Rate Case
28 U-17882	Consumers Energy Co. Gas	Rate Case
29 U-17999	DTE Gas Company	Rate Case
30 U-18014	DTE Electric Company	Rate Case
31 U-17990	Consumers Energy Co. Electric	Rate Case
32 U-18124	Consumers Energy Co. Gas	Rate Case
33		

1	U-18322	Consumers Energy Co. Electric	Rate Case
2	U-18255	DTE Electric Company	Rate Case
3	U-18370	Indiana Michigan Power Co.	Rate Case
4	U-18419	DTE Electric Company	Certificate of Necessity
5	U-18424	Consumers Energy Co. Gas	Rate Case
6	U-18999	DTE Gas Company	Rate Case
7	U-20111	Upper Peninsula Power Co.	TCJA Credit A Case
8	U-20268	Alpena Power Company	TCJA Credit B Case
9	U-20134	Consumers Energy Co. Electric	Rate Case
10	U-20287	Consumers Energy Co. Gas	TCJA Credit B Case
11	U-20165	Consumers Energy Co. Electric	Integrated Resource Plan
12	U-20162	DTE Electric Company	Rate Case
13	U-20276	Upper Peninsula Power Co.	Rate Case
14	U-20322	Consumers Energy Co. Gas	Rate Case
15	U-20350	Upper Peninsula Power Co.	Integrated Resource Plan
16	U-20479	SEMCO Energy Gas Co.	Rate Case
17	U-20359	Indiana Michigan Power Co.	Rate Case
18	U-20561	DTE Electric Company	Rate Case
19	U-20642	DTE Gas Company	Rate Case
20	U-20650	Consumers Energy Co. Gas	Rate Case
21	U-20697	Consumers Energy Co. Electric	Rate Case
22	U-20713	DTE Electric Company	Voluntary Green Pricing
23	U-21015	DTE Electric Company	Securitization Case
24	U-20940	DTE Gas Company	Rate Case
25	U-20963	Consumers Energy Co. Electric	Rate Case
26	U-21090	Consumers Energy Co. Electric	Integrated Resource Plan
27	U-21148	Consumers Energy Co. Gas	Rate Case
28	U-20836	DTE Electric Company	Rate Case
29	U-20993	Saginaw Bay Pipeline Co.	Rates for Transportation
30	U-21224	Consumers Energy Co. Electric	Rate Case
31	U-21286	Upper Peninsula Power Co.	Rate Case
32	U-21193	DTE Electric Company	Integrated Resource Plan
33	U-20827	DTE Electric Company	PSCR Reconciliation
34	U-21308	Consumers Energy Co. Gas	Rate Case
35	U-21297	DTE Electric Company	Rate Case
36	U-21389	Consumers Energy Co. Electric	Rate Case
37	U-21461	Indiana Michigan Power Co.	Rate Case
38	U-21525	DTM Michigan Lateral Co.	Rate Request
39	U-21490	Consumers Energy Co. Gas	Rate Case
40	U-21291	DTE Gas Company	Rate Case
41	U-21540	Michigan Gas Utilities Corp.	Rate Case
42	U-21555	Upper Peninsula Power Co.	Rate Case

1 Q. What is the purpose of your testimony?

2 A. The purpose of my testimony is to present the MPSC Staff's (Staff) projected
3 revenue deficiency, projected operating income, and projected Monroe regulatory
4 asset – return on for DTE Electric Company (DTE Electric or the Company) in
5 this case.

6 Q. Are you sponsoring any exhibits?

7 A. Yes. I am sponsoring the following exhibits:

8 Exhibits:

9 S-1 Schedule A-1: Projected Revenue Deficiency (Sufficiency)

10 S-1 Schedule A-1.2: Monroe Regulatory Asset – Return On

11 S-3 Schedule C-1: Projected Net Operating Income

12 S-3 Schedule C-1.1: Development of Projected Net Operating
13 Income

14 S-3 Schedule C-14: Projected Tax Effect of Interest Allowed in
15 Ratemaking Formula

16 S-3 Schedule C-15: Projected Tax Effect of Interest Synchronization
17 Adjustment

18 **REVENUE DEFICIENCY:**

19 Q. Referring to Exhibit S-1, Schedule A-1, what is Staff's projected revenue
20 deficiency?

21 A. Staff projects a revenue deficiency of \$239,833,000, a revenue requirement
22 decrease of \$216,600,000 from the Company's originally filed revenue deficiency
23 of \$456,434,000. (Exhibit A-11, Schedule A1; Exhibit S-1, Schedule A-1, Line

11.) The main factors driving Staff's overall adjustment are Staff's lower rate base, its higher net operating income, and its lower required rate of return. In addition to my testimony, other Staff witnesses provide testimony and supporting exhibits regarding the adjustments to the Company's revenue deficiency.

MONROE REGULATORY ASSET – RETURN ON:

Q. Referring to Exhibit S-1, Schedule A1.2, what is Staff's projected Monroe regulatory asset return on?

A. Staff's projected Monroe regulatory asset return on is \$136,947,000, which is \$572,000 less than the Company's originally filed amount of \$137,518,000 found on Exhibit A-11, Schedule A1.2, Line 4.

Q. Why is Staff's Monroe regulatory asset – return on \$572,000 less than the company's projection?

A. Staff's Monroe regulatory asset – return on is \$572,000 less than the Company's projection because Staff applied its 6.54% projected pre-tax cost of capital in lieu of the Company's projected pre-tax cost of capital of 6.57% for the Monroe regulatory asset – return on. Both Staff and DTE's pretax weighted average cost of capital (WACC) applied to the Monroe regulatory asset are recalculated from the overall cost of capital using 9% ROE in accordance with the MPSC's U-21193 order dated July 26, 2023. (Exhibit A-14, Schedule D1; Exhibit S-4, Schedule D1.) Staff recommends that the Monroe regulatory asset – return on should be recalculated based upon the cost of capital decisions made by the ALJ and the Commission.

NET OPERATING INCOME:

1 Q. Referring to Exhibit S-3, Schedule C-1, what is Staff's projected net operating
2 income?

3 A. Staff's projected net operating income is \$1,174,574,000, an increase of
4 \$84,474,000 from the Company's originally filed net operating income of
5 \$1,087,100,000 found on Exhibit A-13, Schedule C1, Line 17. Details of Staff's
6 adjustments to net operating income, including the Staff witness sponsoring and
7 explaining each adjustment, can be found on Exhibit S-3, Schedule C-1.1.

8 **INTERST SYNCHRONIZATION:**

9 Q. Please describe Exhibit S-3, Schedule C-14.

10 A. Exhibit S-3, Schedule C-14, shows the calculation of the projected tax effect of
11 interest allowed in ratemaking formula for the projected yest year and the
12 corresponding change in income tax.

13 Q. Please describe Exhibit S-3, Schedule C-15.

14 A. Exhibit S-3, Schedule C-15, shows the calculation of the projected tax effect of
15 interest synchronization adjustment for the projected test year.

16 **SUMMARY:**

17 Q. Please summarize Staff's recommendations.

18 A. Staff recommends a projected total company revenue deficiency of \$239,833,000
19 and a projected total company net operating income of \$1,174,574,000.
20 Additionally, Staff recommends a Monroe regulatory asset – return on of
21 \$136,947,000 but Staff recommends that the amount should be recalculated based
22 upon the cost of capital decisions made by the ALJ and the Commission.

23 Q. Does this conclude your testimony?

1 || A. Yes.

1 MR. ORRIS: Staff moves to bind in the
2 Direct Testimony of Mark J. Pung, consisting of a cover
3 sheet and 12 pages of qualifications, questions, and
4 answers. Mr. Pung also sponsored several exhibits which
5 are listed in S-6, and those were priorly admitted
6 through the record he also sponsored.

7 JUDGE WALLACE: O.K. So we've already
8 admitted S-6. All right. Is there any objection to
9 binding in the direct testimony of Mr. Pung?

10 Hearing none, the testimony is bound in.

11 (Testimony bound in.)

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1 Q. Please state your name and business address.

2 A. My name is Mark J. Pung. My business address is 7109 West Saginaw Highway,
3 Lansing, Michigan 48917.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission (MPSC or
6 Commission) as a Departmental Specialist in the Rates and Tariff Section of the
7 Regulated Energy Division. I serve as the section's Electric Cost of Service
8 Specialist.

9 Q. Please briefly describe your educational background.

10 A. I graduated from Michigan State University in 2004 with a Bachelor of Arts
11 degree in Supply Chain Management.

12 Q. Have you completed any other courses?

13 A. Yes, I have completed two graduate courses at Central Michigan University's
14 Lansing campus, Quantitative Applications in Administrative Decision Making
15 and Financial Management. I have also completed the Association of Edison
16 Illuminating Company's Fundamentals of Customer Load Data Analysis course,
17 the National Association of Regulatory Utility Commissioners (NARUC) Annual
18 Regulatory Studies Program held at Michigan State University, and EUCI Electric
19 Cost-of-Service Course - Essential Concepts for a Changing Industry.

20 Q. What are your current responsibilities at the MPSC?

21 A. As the Electric Cost of Service Specialist, I am responsible for developing Staff
22 electric cost of service studies, interpreting and applying laws related to electric
23 cost-of-service, and any other electric cost-of-service-related issues in cases

1 before the Commission under the supervision of the Rates and Tariff Section

2 Manager.

3 Q. Have you previously presented testimony or participated in utility cases before the
4 MPSC?

5 A. Yes. I have participated in the following cases:

6	<u>Case No.</u>	<u>Utility</u>	<u>Description</u>
7	U-14270-R	Presque Isle, Cherryland, Tri-County, and	PSCR Reconciliation
8		Great Lakes	
9	U-14637	Presque Isle Electric and Gas Cooperative	Rate Design
10	U-14710-R	Presque Isle, Cherryland, Tri-County, and	PSCR Reconciliation
11		Great Lakes	& TIER Audit
12	U-14713-R	Ontonagon County REA	Rate Design
13	U-14745	Upper Peninsula Power Company	Rate Design
14	U-14790	Great Lakes Energy Cooperative	Rate Design
15	U-14893	SEMCO Energy Gas Company	Rate Design
16	U-15071	Wisconsin Electric Power Company	Rate Design
17	U-15114	Wisconsin Public Service Corp.	Ex parte of new rate
18	U-15244	Detroit Edison Company	Rate Design
19	U-15245	Consumers Energy Company	Rate Design
20	U-15487	Alpena Power Company	Ex parte of new rate
21	U-15500	Wisconsin Electric Power Company	Rate Design
22	U-15645	Consumers Energy Company	Rate Design
23	U-15981	Wisconsin Electric Power Company	Rate Design

1	<u>Case No.</u>	<u>Utility</u>	<u>Description</u>
2	U-15988	Upper Peninsula Power Company	Rate Design
3	U-16180	Indiana Michigan Power Company	Rate Design
4	U-16472	Detroit Edison Company	Rate Design
5	U-16794	Consumers Energy Company	Rate Design
6	U-16860	Consumers Energy Company	Revenue Decoupling
7	U-16877	Michigan Consolidated Gas Company	Revenue Decoupling
8	U-17043	Consumers Energy Company	VHWF
9	U-17087	Consumers Energy Company	Rate Design
10	U-17221	Michigan Gas Utilities Corporation	Revenue Decoupling
11	U-17222	Michigan Gas Utilities Corporation	Un-collectables
12	U-17479	Tilden Mining Company	RAS-1 Tariff
13	U-17530	DTE Michigan Gathering Company	Ex parte of new rate
14	U-17547	Michigan Gas Utilities Corporation	Revenue Decoupling
15	U-17686	Michigan Gas Utilities Corporation	Tariff Revisions
16	U-17688	Consumers Energy Company	Act 169 Case
17	U-17735	Consumers Energy Company	Rate Design
18	U-17895	Upper Peninsula Power Company	Rate Design
19	U-17990	Consumers Energy Company	Rate Design
20	U-18255	Detroit Edison Company	Rate Design
21	U-18462	Northern States Power Company	Rate Design
22	U-20101	Alpena Power Company	TCJA Credit A
23	U-20108	Northern States Power Company	TCJA Credit A

1	<u>Case No.</u>	<u>Utility</u>	<u>Description</u>
2	U-20110	Upper Michigan Energy Resource Corp.	TCJA Credit A
3	U-20111	Upper Peninsula Power Company	TCJA Credit A
4	U-20162	Detroit Edison Company	Rate Design
5	U-20359	Indiana Michigan Power Company	Rate Design
6	U-20697	Consumers Energy Company	Rate Design
7	U-21045	Alpena Power Company	Rate Design
8	U-21097	Northern States Power Company	Rate Design
9	U-20836	Detroit Edison Company	Rate Design
10	U-21224	Consumers Energy Company	Cost of Service
11	U-21297	Detroit Edison Company	Cost of Service
12	U-21389	Consumers Energy Company	Cost of Service
13	U-21488	Alpena Power Company	Cost of Service

1 Q. What is the purpose of your testimony?

2 A. The purpose of my testimony is to present MPSC Staff's (Staff) class cost-of-
 3 service study (COSS), which allocates Staff's recommended test-year revenue
 4 requirements to DTE Electric Company's (the Company) customer classes. I will
 5 also cover the following: 1) Staff's recommended capacity cost revenue
 6 requirement, 2) Staff's recommended customer charges, 3) Staff's Infrastructure
 7 Recovery Mechanism (IRM) revenue requirement and allocation.

8 Q. Are you sponsoring any exhibits?

9 A. Yes, I am sponsoring the following exhibits:

Exhibit	Schedule	Description
S-6	F1.1	Staff's version of the Company's Exhibit A-16, Schedule F1.1 (UCOS, Production by Customer Class, TME December 31, 2025). This schedule summarizes the results of the production portion of Staff's COSS.
S-6	F1.2	Staff's version of the Company's Exhibit A-16, Schedule F1.2 (UCOS, Distribution by Voltage Class, TME December 31, 2025). This schedule summarizes the results of the distribution portion of Staff's COSS.
S-6	F1.4	Staff's version of the Company's Exhibit A-16, Schedule F1.4 (Customer Charges by Voltage Class).
S-6	F1.5	Staff's version of the Company's Exhibit A-16, Schedule F1.5 (Capacity Charge Revenue Requirement by Customer Class). Page 5 of Schedule F1.5

1			summarizes Staff's variable O&M expenses in the
2			COSS. Page 6 of Schedule F1.5 shows the calculation of
3			Staff's MERC revenue requirement.
4	S-6	P3	Staff's version of the Company's Exhibit A-26,
5			Schedule P3 (Projected 2025 Capacity-Related
6			Generation Cost & Energy Sales Revenue Net of Fuel
7			Cost).
8	S-6	P4	Staff's 2023 Energy Sales Revenue Net of Fuel Cost
9	S-6	X4	Staff's version of the Company's Exhibit A-33,
10			Schedule X4 (Infrastructure Recovery Mechanism –
11			Incremental Revenue Requirement - Distribution
12			Operations).
13	S-6	X5	Staff's version of the Company's Exhibit A-33,
14			Schedule X5 (Infrastructure Recovery Mechanism –
15			Incremental Revenue Requirement - Distribution
16			Operations, Example of \$1.0 MM Under Investment).
17	S-6	X6	Staff's version of the Company's Exhibit A-33,
18			Schedule X6 (Infrastructure Recovery Mechanism -
19			Distribution Operations. Incremental Revenue
20			Requirement by Voltage Class).
21	S-19		Response to Staff Audit Request MJP-1 (U-21260,
22			Exhibit A-22, 2023 Energy Sales Revenue Net of Fuel
23			Cost)

1 Q. Were these exhibits prepared by you or under your direction?

2 A. Yes, they were.

3 Q. How has Staff modified the Company's test year COSS?

4 A. Where Staff is recommending adjustments, Staff has replaced the Company's
5 inputs with Staff's inputs so that the resulting COSS shows Staff's proposed
6 revenue requirement. In addition, Staff made an additional change to the COSS
7 allocators that I will address in more detail.

8 Q. How are the results of Staff's COSS incorporated into Staff's case?

9 A. Staff witness David Isakson utilized the results of Staff's COSS and has designed
10 rates to collect the appropriate amount of revenue for each customer class.

11

12 Capacity Revenue Requirement

13 Q. Is the Company proposing to use the same capacity cost method as ordered by the
14 Commission in MPSC Case No. U-21297?

15 A. No. The Company has not included a Reconciliation of Net Sales Benefit
16 Difference in its calculation. In Case No. U-21297, this reconciliation was
17 included by Company witness Burgdorf as Exhibit A-26, Schedule P4.

18 Q. Please describe Staff's capacity revenue requirement method.

19 A. Staff used the Commission approved method that includes a Reconciliation of Net
20 Sales Benefit Difference in its calculation of the capacity charge. Section 6w(4) of
21 PA 341 states:

22 The commission shall provide for a true-up mechanism that results in a
23 utility charge or credit for the difference between the projected net
24 revenues described in subsection (3) and the actual net revenues reflected

1 in the capacity charge. The true-up shall be reflected in the capacity
2 charge in the subsequent year. The methodology used to set the capacity
3 charge shall be the same methodology used in the true-up for the
4 applicable planning year.

5 Staff interprets this section as requiring that a reconciliation be performed and
6 included in the capacity charge calculation each year, regardless of whether a
7 charge was administered in that year or not. The Company provided a calculation
8 of this reconciliation as Exhibit A-22 in its currently pending PSCR reconciliation
9 case No. U-21260. The Company also supplied Exhibit A-22 in response to Staff
10 Audit Request MJP-1 and Staff has included it in this case as Staff Exhibit S-19.
11 Staff has incorporated the Company's calculation into its capacity charge revenue
12 requirement calculation.

13 Q. What are the results of adding the Reconciliation of Net Sales Benefit Difference
14 to Staff's capacity revenue requirement?

15 A. In PSCR reconciliation case No. U-21260, Company Exhibit A-22 results in a
16 2023 reconciliation amount of approximately \$168.1 million. When you apply
17 this amount to the Projected 2025 Energy Sales Revenue Net of Fuel Costs, it
18 reduces that amount from the Company's projection of \$983.3 million to
19 approximately \$815.3 million. The effect of this is that it reduces the amount to be
20 subtracted from the capacity revenue requirement, thus increasing it by 168.1
21 million.

22 Q. What is Staff's capacity revenue requirement compared to the Company's?

23 A. Staff's capacity revenue requirement is \$1,035.6 million. The Company's
24 capacity revenue requirement is \$973.7 million. Staff's revenue requirement is

1 higher than the Company's due to including a reconciliation of net sales benefit
2 difference as required by the statute. Staff's lower revenue requirement combined
3 with including a reconciliation results in a difference of \$61.9 million.

4 Q. Does Staff agree with the Company that MISO Schedule 17 administrative costs,
5 chemical costs and emission costs should be included as fuel costs under Section
6 6w(3)(b) of Act 341?

7 A. No. These costs are not fuel costs simply because they occur with the production
8 of energy from the Company's generation assets. They are also not fuel costs
9 because they are directly attributable to "injections" of energy into MISO and
10 must be incurred to generate sales. Section 6w(3)(b) of PA 341 requires that
11 "projected fuel costs" be subtracted from projected energy sales revenue, not
12 "fuel-related costs".

13

14 Customer Charges

15 Q. Is the Company proposing to use the same customer charge method ordered by
16 the Commission in MPSC Case No. U-21297?

17 A. Yes. The Company's customer charge calculation as shown in Exhibit A-16,
18 Schedule F1.4, is consistent with Staff's methodology ordered by the Commission
19 in U-21297.

20 Q. Is the Company proposing any changes to the residential customer charge in this
21 case?

22 A. No. The Company is not proposing any changes.

23 Q. Is Staff proposing any changes to the residential customer charge?

1 A. No. Staff's cost-of-service study results in a residential customer charge of \$8.86
2 per customer per month. The current residential customer charge is \$8.50 per
3 month. Based on Staff's results using the approved customer charge method, no
4 changes are necessary to the residential customer charge.

5 Q. Is the Company proposing any changes to the customer charge for any other
6 customer classes?

7 A. No, it is not.
8

9 Infrastructure Recovery Mechanism

10 Q. What is Staff's recommendation for the distribution operations Infrastructure
11 Recovery Mechanism (IRM)?

12 A. Staff recommends the IRM revenue requirement and surcharge calculation should
13 be updated for Staff's proposed rate of return and any other decisions affecting it
14 in the Commission's final order.

15 Q. Does Staff take issue with the Company's allocation of the distribution related
16 Infrastructure Recovery Mechanism (IRM) revenue requirement?

17 A. No. The Company has proposed to allocate the distribution related IRM revenue
18 requirement based upon allocation schedule 521T, which is equal to each voltage
19 class's share of distribution related plant excluding the transmission class. This
20 allocation method complies with the Commission's December 1, 2023 Order in
21 Case No. U-21297 where the Commission directed the Company to remove any
22 allocation of IRM costs from transmission level customers. (MPSC Case No. U-
23 21297. December 1st, 2023 Order. p.290.)

Purchased Power Capacity Cost Allocation

Q. How has the Company allocated purchased power capacity costs in this case?

A. The Company has allocated purchased power capacity costs using allocator 251, which is based upon 4 CP (coincident-peak), 100% demand but excluding the R10 rate class. This allocator is developed from allocator 200B which is a 4 CP, 100% demand allocator.

Q. Does Staff agree with this allocation method for purchased power capacity costs?

A. No. Staff does not agree with this allocation method. Staff views production assets, including those that provide purchased power capacity to the Company, as providing both energy and capacity. There should be some recognition of both energy use and capacity use in the allocation factor for purchased power capacity costs. The Commission has long recognized the dual nature of production assets going back to 1976 in Case No. U-4771 where the Commission recognized a production allocator of 12 CP 75/0/25.

Q. How does Michigan's other large electric provider, Consumers Energy Company allocate purchased power capacity costs?

A. In Consumers Energy's most recent general electric rate case, U-21389, The Commission ordered that Consumers Energy continue to allocate purchased power capacity costs using a 4 CP 75/0/25 allocator.

Q. What allocator does Staff recommend the Company use to allocate purchased power capacity costs in this case?

1 A. Staff recommends the Company use allocator 255. This allocator is based upon
2 allocator 200B which is a 4 CP, 100% demand allocator but then is adjusted to
3 include a 75% demand 25% total energy weighting which is consistent with how
4 the Commission has determined that these costs should be allocated.

5
6
7 Summary

8 Q. Please summarize your recommendations in this proceeding.

9 A. Staff's recommendations are as follows:

10 1. Staff recommends the Commission approve its calculation of the capacity
11 revenue requirement, which includes a Reconciliation of Net Sales Benefit
12 Difference as required by Section 6w(4) of PA 341. The Company's capacity
13 revenue requirement is \$973.7 million. Staff's capacity revenue requirement is
14 \$1,035.6 million.

15 2. Staff recommends no changes to the current \$8.50 customer charge. Staff's
16 calculation of the residential customer charge using the approved customer charge
17 method results in a charge of \$8.86 per month.

18 3. Staff recommends the Commission approve Staff's distribution IRM revenue
19 requirement which has been updated with Staff's rate of return. The Company's
20 allocation of the distribution IRM is in compliance with the Commission's Order
21 in U-21297 to remove any allocation to transmission customers.

22 4. Staff recommends that allocator 255 be used to allocate purchased power
23 capacity costs in alignment with the Commission's long-standing practice of
24 recognizing the dual nature of production assets. Allocator 255 is a 4 CP 75/0/25
25 allocator and would align the Company with Michigan's other large electric
26 provider, Consumers Energy Company.

27 Q. Does this conclude your testimony?

28 A. Yes, it does.

1 JUDGE WALLACE: Staff moves to bind in
2 the Direct Testimony of Nicholas M. Revere, consisting of
3 a cover sheet and 12 pages of qualifications, questions,
4 and answers. Mr. Revere sponsored no exhibits with his
5 direct testimony.

6 O.K. Is there any objection to binding
7 in the direct testimony of Mr. Revere?

8 Hearing none, the testimony is bound in.
9 (Testimony bound in.)

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STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

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**In the matter of the Application of
DTE ELECTRIC COMPANY
for authority to increase its rates, amend
its rate schedules and rules governing the
distribution and supply of electric energy, and
for miscellaneous accounting authority.**

Case No. U-21534

**QUALIFICATIONS AND DIRECT TESTIMONY OF
NICHOLAS M. REVERE
MICHIGAN PUBLIC SERVICE COMMISSION**

July 26, 2024

1 Q. Please state your name and business address.

2 A. My name is Nicholas M. Revere. My business address is 7109 West Saginaw Hwy,
3 Lansing, Michigan 48917.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission (MPSC or Commission) as
6 the Manager of the Rates and Tariff Section of the Regulated Energy Division.

7 Q. Would you briefly describe your academic background?

8 A. I earned a Bachelor of Arts degree in Political Science and a Bachelor of Arts degree in
9 Economics from Michigan State University in 2006. In August of 2008 and 2009, I
10 completed the annual National Association of Regulatory Utility Commissioners
11 (NARUC) regulatory studies program at Michigan State University, which included
12 courses on ratemaking, rate case auditing, regulatory policy, and other regulatory issues.
13 In September of 2010, I completed the Institute for Public Utilities Advanced Regulatory
14 Studies Program. In October 2012, I completed the Association of Edison Illuminating
15 Companies' Advanced Course in Load Research.

16 Q. What are your current responsibilities at the MPSC?

17 A. As Manager of the Rates and Tariff Section, I supervise the members of and oversee the
18 responsibilities of the section. The responsibilities of the section include, but are not
19 limited to, analyzing utility reports, financial records, and rate case filings to determine
20 the appropriate level of rates for regulated energy utilities, utilizing laws, regulations, and
21 Commission policies. The section is charged with conducting MPSC Staff (Staff) Cost of
22 Service allocation studies (COSS) and rate designs for gas and electric utilities and
23 reviewing special contracts, gas storage rates, and Act 9 intrastate pipeline rates. The

section is also involved in customer complaint and inquiry processing, updating electric and gas comparison spreadsheets for the MPSC website, and tariff administration.

Q. Have you previously filed testimony in any cases before the Commission?

A. Yes. I filed testimony in the following cases:

<u>Case</u>	<u>Company</u>	<u>Case Type</u>
U-15645	Consumers Energy Electric	Rate Case
U-15766	MichCon Gathering v. Highmount	Act 9 Complaint
U-15768	Detroit Edison/DTE Electric	Rate Case
U-15985	MichCon/DTE Gas	Rate Case
U-15986	Consumers Energy Gas	Rate Case
U-16169	SEMCO Energy Gas	Rate Case
U-16191	Consumers Energy Electric	Rate Case
U-16566	Consumers Energy Electric	RDM Recon
U-16568	Upper Peninsula Power Company	RDM Recon
U-16780	Detroit Edison/DTE Electric	RDM Recon
U-16830	Wisconsin Electric Power Company	Rate Case
U-16952	Detroit Edison/DTE Electric	ECIM Recon
U-16999	MichCon/DTE Gas	Rate Case
U-17643	Consumers Energy Gas	Rate Case
U-17688	Consumers Energy Electric	Act 169
U-17689	Detroit Edison/DTE Electric	Act 169
U-17701	MichCon/ DTE Gas	IRM
U-17735	Consumers Energy Electric	Rate Case

1	U-17767	Detroit Edison/DTE Electric	Rate Case
2	U-17882	Consumers Energy Gas	Rate Case
3	U-17990	Consumers Energy Electric	Rate Case
4	U-18010	Consumers Energy Gas	Contract
5	U-18014	Detroit Edison/DTE Electric	Rate Case
6	U-18124	Consumers Energy Gas	Rate Case
7	U-18224	Upper Michigan Energy Resources Corporation	CON
8	U-18239	Consumers Energy Electric	SRM
9	U-18248	Detroit Edison/DTE Electric	SRM
10	U-18250	Consumers Energy Electric	Securitization
11	U-18253	Upper Michigan Energy Resources Corporation	SRM
12	U-18254	Upper Peninsula Power Company	SRM
13	U-18255	Detroit Edison/DTE Electric	Rate Case
14	U-18258	Cloverland Electric Cooperative	SRM
15	U-18322	Consumers Energy Electric	Rate Case
16	U-18370	Indiana Michigan Power Company	Rate Case
17	U-18999	DTE Gas	Rate Case
18	U-20111	Upper Peninsula Power Company	TCJA Credit A
19	U-20114	Michigan Gas Utilities	TCJA Credit A
20	U-20130	Upper Michigan Energy Resources Corporation	SRM
21	U-20131	Upper Peninsula Power Company	SRM
22	U-20144	Cloverland Electric Cooperative	SRM
23	U-20162	DTE Electric	Rate Case

1	U-20189	DTE Gas	TCJA Credit B
2	U-20276	Upper Peninsula Power Company	Rate Case
3	U-20284	DTE Electric	TCJA Credit B
4	U-20298	DTE Gas	TCJA Calculation C
5	U-20309	Consumers Energy	TCJA Calculation C
6	U-20316	Indiana Michigan Power Company	TCJA Credit B
7	U-20317	Indiana Michigan Power Company	TCJA Calculation C
8	U-20322	Consumers Energy Gas	Rate Case
9	U-20233	Consumers Energy Gas	GCR Plan
10	U-20359	Indiana Michigan Power Company	Rate Case
11	U-20479	SEMCO Energy Gas	Rate Case
12	U-20561	DTE Electric	Rate Case
13	U-20642	DTE Gas	Rate Case
14	U-20650	Consumers Energy Gas	Rate Case
15	U-20150	CARE v. Upper Peninsula Power Company	Complaint
16	U-20697	Consumers Energy Electric	Rate Case
17	U-20889	Consumers Energy Electric	Securitization
18	U-20940	DTE Gas	Rate Case
19	U-20963	CE Electric	Rate Case
20	U-21148	Consumers Energy Gas	Rate Case
21	U-20836	DTE Electric	Rate Case
22	U-21224	Consumers Energy Electric	Rate Case
23	U-21286	Upper Peninsula Power Company	Rate Case

1	U-21308	Consumers Energy Gas	Rate Case
2	U-21297	DTE Electric	Rate Case
3	U-21389	Consumers Energy Electric	Rate Case
4	U-21461	Indiana Michigan Power Company	Rate Case
5	U-21384	DTE Gas	Depreciation
6	U-21291	DTE Gas	Rate Case
7	U-21490	Consumers Energy Gas	Rate Case
8	U-21540	Michigan Gas Utilities	Rate Case
9	U-21555	Upper Peninsula Power Company	Rate Case

1 Q. What is the purpose of your testimony in this case?

2 A. The purpose of my testimony is to present Staff's position on portions of the Company's
3 fleet electrification programs and Staff's alternative calculation for the state reliability
4 mechanism (SRM) capacity revenue requirement and charges.

5 Q. Are you sponsoring any exhibits?

6 A. No.

7 **Fleet Electrification CBAs**

8 Q. What aspects of the Company's proposed fleet electrification programs are you
9 addressing?

10 A. I will be addressing Staff's position on how the benefits to the ratepayers supporting the
11 rebate programs characterized by the Company as "Fleet – Other DCFCs" and "Fleet –
12 Other Level 2" can be assured through proper project selection.

13 Q. What benefits does the Company claim will accrue to the ratepayers supporting the
14 program?

15 A. The Company claims an NPV benefit of \$5 million for the Fleet – Other DCFCs and \$37
16 million for the Fleet – Other Level 2 program.¹ It is unclear, however, how much of the
17 "supporting functions" with an NPV cost of \$17 million² are associated with these
18 programs or in what category the costs of certain aspects of the Company's programs
19 specific to fleets, such as eFleet Advisory Services, are included.

20 Q. Does Staff agree that the benefits claimed by the Company will be produced?

¹ Company witness Pina Bennett direct testimony, p. 57.

² *Id.*

1 A. With proper project selection, and assuming the supporting functions associated directly
2 with assisting fleets are not too high, Staff believes they are achievable. In order to
3 maximize the benefits from fleet electrification and ensure the claimed benefits have the
4 potential to materialize, particularly given the potential size of the participating fleet
5 loads, is to conduct a cost-benefit analysis (CBA) on each potential project to ensure that
6 the expected benefits to the ratepayers supporting the program through rates from the
7 increased grid utilization outweigh the costs of any rebates or increased system costs
8 creating upward pressure on rates. The Company separates DCFC and Level 2 fleet
9 chargers into separate categories, but no discussion is given as to how these rebates tie-in
10 to the processes the Company goes through when contacted by a fleet customer to discuss
11 electrification. It is unclear if the Company is following the process described by
12 Company witness Bennett common among other utilities to assess fleet electrification
13 potential, but it seems a desirable practice, and a determination of a CBA for supporting
14 ratepayers as part of this process seems like a good fit.

15 Q. Did the Company prepare, Staff request, or the Commission require individual customer-
16 level CBA for other EV programs?

17 A. Not to Staff's knowledge. However, there are substantive differences between the other
18 programs and the fleet programs I am discussing that make such a requirement necessary
19 to ensure the potential benefits to the ratepayers supporting the programs are realized.
20 The impetus behind, for example, home charger rebates, was to eliminate barriers for EV
21 adoption mainly for residential customers. As each residential customer is so small, the
22 potential increase in costs for any given customer has little impact on the total. Also, in
23 an attempt to minimize range anxiety and reduce the barriers to EV adoption, it makes

sense to include DCFC and other public charging in the CBA, as they are important to enable the realization of the benefits. For these reasons, it makes sense to view the benefits and costs as a whole rather than at an individual customer basis for at least certain other programs, such as the residential rebate programs. For fleets, however, the customers are likely large enough to impose substantial costs, particularly with the inclusion of DCFC chargers that may only be used by the participating customer. As DCFC chargers are a large, potentially intermittent load, it is entirely possible they will cause substantial costs that could be borne by other customers. Just like with the Company's other EV programs, it is important that the benefits enabled by the inclusion of a DCFC offset those costs. However, as any given DCFC only enables the benefits from a particular customer in fleet segment, as opposed to all customers in the on-route segment, it is important to conduct the analysis at the same individual customer-level.

Q. Is the high-level CBA submitted by the Company sufficient to address these concerns?

A. No, based on the above discussion. However, if the Company is required to ensure that each individual participating customer produces a net benefit to the supporting ratepayers, the concerns will be addressed. The determination of a net benefit should be done through a customer-specific CBA, including all relevant information, such as costs to the system of the particular set up, rate benefit of incremental load, and consider such factors as expected time and duration of charging, maximum load for charging, and any other relevant factors.

Alternative SRM Calculation

Q. Why is Staff presenting an alternative SRM calculation in the instant case?

1 A. Since the initial approval of the current method of calculating the SRM capacity charge
2 and associated rates, Staff has become aware of several potential issues with that method.
3 For example, the required reconciliation of projected energy sales revenue net of fuel
4 costs to the actuals, calculated as the value of the Company's generation at the locational
5 marginal price (LMP), has the potential to drive the capacity charge unreasonably low or
6 high depending on the relationship between the Company's costs to produce that energy
7 and both actual and projected LMPs. In addition, the current capacity charge method
8 produces increasingly questionable results the more a utility relies on purchased power
9 agreements for the provision of power to its customers. For these reasons, Staff is
10 presenting an alternative method for calculating the SRM capacity charge and revenue
11 requirement, consistent with its proposal in the initial set of SRM cases.

12 Q. What costs are properly included as part of the capacity charge?

13 A. 2016 PA 341 Section 6w(3) lays out which costs should be included, and offsets thereto,
14 as follows:

15 In order to ensure that noncapacity electric generation services are not
16 included in the capacity charge, in determining the capacity charge, the
17 commission shall do both of the following and ensure that the resulting
18 capacity charge does not differ for full service load and alternative electric
19 supplier load:
20

21 (a) For the applicable term of the capacity charge, include the capacity-
22 related generation costs included in the utility's base rates, surcharges, and
23 power supply cost recovery factors, regardless of whether those costs
24 result from utility ownership of the capacity resources or the purchase
25 or lease of the capacity resource from a third party.
26

27 (b) For the applicable term of the capacity charge, subtract all non-capacity-
28 related electric generation costs, including, but not limited to, costs
29 previously set for recovery through net stranded cost recovery and
30 securitization and the projected revenues, net of projected fuel costs, from
31 all of the following:

- (i) All energy market sales.
- (ii) Off-system energy sales.
- (iii) Ancillary services sales.
- (iv) Energy sales under unit-specific bilateral contracts.

Q. What costs should be considered capacity-related for the purpose of calculating the capacity charge per 2016 PA 341 Section 6w(3)?

A. Costs incurred to supply capacity should be included as capacity-related costs. In Staff's opinion, the proper cost of capacity is the Cost of New Entry (CONE), or the cost to build a combustion turbine (CT). The characteristics of a CT are such that it effectively supplies only capacity. A CT is relatively expensive to run to produce energy, but relatively inexpensive to build. Therefore, it is only economically utilized to supply energy in those hours when load is at its highest. These hours are also those which are considered to set the capacity need of the utility to serve its customers. Plants other than CTs are more expensive to build and less expensive to run, making them the most cost-effective choice only if they run enough hours a year so that the total cost is lower. Therefore, the difference between the cost to build a CT and any other type of plant is the capital cost expended to produce lower energy costs. In Staff's opinion, this cost should properly be considered an energy cost. However, the law requires that net sales to the market be applied as an offset to the capacity-related costs. As all energy is bid into the market at the cost to run a plant, but plants are paid if dispatched at the highest bid called in the supply stack, these net-energy market sales (imperfectly) capture what Staff would consider to be the energy related portion of capacity costs. Therefore, to remove all costs above a CT and then apply an offset which effectively, if imperfectly, does the same, would be double counting the offset. An alternative is discussed below.

1 Q. What costs would be identified as capacity-related under this method?

2 A. Costs currently allocated using the production cost allocator and other capacity-related
3 costs would be the starting point for this determination. Then the percentage applied to
4 determine which of those costs are capacity-related would be set at the percentage
5 necessary to make the resulting amount equal to CONE or some other measure of the value
6 of capacity, as determined by the Commission. This would treat all costs in excess of
7 CONE (or the Commission's chosen value of capacity) as non-capacity-related costs.
8 Should the Commission determine such a method is more appropriate, Staff recommends
9 that either the CONE for MISO zone 7 in the MISO planning year best matching the
10 Company's projected test year or the cost of capacity used to calculate payments by the
11 Company to PURPA generators, be utilized. Either of these would provide consistency in
12 the Commission's determination of the value of capacity.

13 Q. What is the alternative to the current method of determining net energy sales mentioned
14 above?

15 A. The costs associated with purchasing energy from the market when the Company's plants
16 produce less than its customers use are included in rates as an energy cost, appropriately.
17 As a result, and to avoid the potential double-count mentioned previously in my testimony,
18 the revenue produced from energy sales into the market resulting from plants producing
19 above the use of the Company's customers should be included as an offset to the cost of
20 the capacity used to produce that energy. In fact, Section 6w(3)(b) of Act 341 expressly
21 requires revenue from "all energy market sales" be included as an offset to the cost of
22 capacity. Beyond the statutory requirement, it is the appropriate disposition of such
23 revenue, as it is the additional capital expenditure over that of a CT which enables the

1 production of energy at a cost low enough to make money in the market. Therefore,
2 revenue from such sales should be used to offset the higher capital expenditures required
3 to enable them. The Commission recognized similar principles in Case No. U-12639, by
4 using net revenues from third party sales to offset fixed generation costs. *In re the*
5 *Implementation of Section 10a(10) of 2000 PA 14*, MPSC Case No. U-12639, 12/20/2001
6 Order, pp 4 and 10.

7 Q. Has Staff prepared a calculation consistent with this alternative calculation of the SRM
8 capacity requirement and charge?

9 A. Not in the instant case, though Staff recommends that, if the Commission finds this
10 alternative compelling, that they require the Company to file a calculation consistent with
11 that determination in their next general rate case.

12 **Summary**

13 Q. Please summarize your recommendations.

14 A. My recommendations are as follows:

15 1. The Commission should require the Company to conduct site-specific CBAs for fleet
16 customers, and only allow for rebates if the determination is a net positive for other
17 customers.

18 2. The Commission should consider Staff's proposed alternative SRM calculation to avoid
19 pitfalls in the current calculation.

20 Q. Does this conclude your testimony?

21 A. Yes, it does.

1 MR. ORRIS: Mr. Revere also sponsored
2 rebuttal testimony, consisting of a cover sheet and 17
3 pages of questions and answers.

4 JUDGE WALLACE: No rebuttal exhibits?

5 MR. ORRIS: No rebuttal exhibits.

6 JUDGE WALLACE: Is there any objection to
7 binding in rebuttal testimony of Mr. Revere?

8 Hearing none, the testimony is bound in.

9 (Testimony bound in.)

10 - - -

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the Application of DTE ELECTRIC COMPANY for authority to increase its rates, amend its rate schedules and rules governing the distribution and supply of electric energy, and for miscellaneous accounting authority. 	)))))))	Case No. U-21534

REBUTTAL TESTIMONY OF
NICHOLAS M. REVERE
MICHIGAN PUBLIC SERVICE COMMISSION

August 16, 2024

1 Q. Are you the same Nicholas M. Revere who filed direct testimony in the instant case?

2 A. Yes.

3 Q. What is the purpose of your rebuttal testimony in this proceeding?

4 A. I will be presenting Staff's response to certain positions taken and claims made by
 5 Energy Michigan (EM) witness Alex J. Zakem regarding the state reliability mechanism
 6 (SRM) and capacity obligations; Citizens Utility Board of Michigan (CUB), Sierra Club
 7 (SC), Michigan environmental Council (MEC), and Natural Resources Defense Council
 8 (NRDC, collectively MNSC) witness Douglas B. Jester regarding how the Company
 9 serves its customers with its generation and electric vehicles (EV); Electrify America
 10 LLC witnesses Jigar J. Shah and Rhiannon Davis regarding EVs; EVgo Services, LLC
 11 (EVgo) witness Lindsey R. Stegall regarding EVs; City of Ann Arbor (AA) witness
 12 Melissa Stults regarding EVs; and Michigan EIBC, IEI, and Advanced Energy United
 13 (collectively MEIU) witness Laura S. Sherman on EVs. My rebuttal will mostly be
 14 organized by topic, as some witness claims I will be responding to overlap.

15 Q. Are you sponsoring any exhibits with your rebuttal testimony?

16 A. No.

17 **State Reliability Mechanism**

18 Q. EM witness Zakem claims that "MISO¹ imposes the capacity obligation on LSEs² by
 19 charging LSEs the MISO Auction Clearing Price ("ACP") (in dollars) multiplied by
 20 PRMR (in MW) of the LSE."³ Does Staff agree?

¹ Midcontinent Independent System Operator

² Load Serving Entity

³ EM witness Zakem Direct Testimony, p. 15.

1 A. No. The auction associated with the ACP is not how the obligation is imposed, it is
2 imposed by MISO telling LSEs the amount of capacity they are required to cover. The
3 auction pays and charges for the supply and requirements of each LSE respectively,
4 effectively netting out the amount that LSEs have supplied and only charging for the
5 amount they are short. EM witness Zakem claims this construct means that “an LSE
6 satisfies its capacity obligation to MISO with money.”⁴ Again, this is incorrect. An LSE
7 satisfies its capacity obligation by *providing Zonal Resource Credits* (ZRCs). To the
8 extent that they fail to do so, applying the auction price to that shortfall acts more as a
9 penalty than the price of the capacity the LSE failed to acquire.

10 Q. EM witness Zakem also claims that the cost of satisfying the capacity requirement is the
11 ACP.⁵ Does Staff agree?

12 A. No. To the extent an LSE has the ZRCs to support its Planning Reserve Margin
13 Requirement (PRMR), the cost of satisfying the requirement is the cost of obtaining those
14 ZRCs. The Company utilizes all capacity resources at its disposal to serve its capacity
15 customers, including any AES customers whose AES has failed to procure sufficient
16 capacity. The law recognizes this by requiring that the capacity charge not differ
17 between full-service and AES load. The charge functions to ensure that, should an AES
18 not be able to supply capacity for its customers, the utility does so at the same cost to
19 those customers that it does for its full-service customers. This cost *is not the ACP*.

20 The current capacity charge utilizes the Commission-approved method of
21 determining the Company’s cost of providing capacity service to any customers to which

⁴ EM witness Zakem Direct Testimony, p. 15.

⁵ EM witness Zakem Direct Testimony, p. 17.

1 it provides that service, which is based on the cost of the agreements and assets the
2 Company so uses. To do as EM witness Zakem suggests would fail to charge for the cost
3 of satisfying the obligation and incorrectly calculate the charge, running afoul of the very
4 statutes claimed to be attempted to harmonize with the proposal. The current method
5 does, in fact, harmonize the statutes in question. In addition, this makes EM witness
6 Zakem's further claim that full-service customers would not be harmed by the proposal⁶
7 incorrect as well. Full-service customers would end up bearing the difference in cost
8 between the Company's *actual* cost of providing capacity and the ACP, likely
9 subsidizing the AES's customers to whom the Company provided capacity service. For
10 these reasons, EM witness Zakem's proposed changes to the SRM capacity charge
11 discussed above should be rejected.

12 Q. EM witness Zakem also seems to imply throughout direct testimony that the LSE is
13 financially responsible for paying the capacity charge to the Company. Does Staff agree
14 that this is how the charge should be applied?

15 A. No. Based on the Commission's determination in U-18239,⁷ the capacity revenue
16 requirement (which is also used to calculate the overall SRM capacity charge) is
17 allocated amongst the classes based on the 4 CP allocator, and then computed into a
18 capacity rate for each rate schedule. This capacity rate is what would be charged to a
19 customer's power supply capacity billing determinants in proportion to the amount of that
20 customer's capacity that the Company, rather than the AES, is responsible for covering.

⁶ EM witness Zakem Direct Testimony, p. 20.

⁷ See pages 68-77 of the 11/21/17 Commission Order in U-18239.

1 EM witness Zakem’s seemingly implied claim also ignores the Commission’s
2 determination in MPSC Case No. U-18239:

3 In making their argument, the intervenors emphasize the wording of Section
4 6w(6), which requires an “electric provider” that has previously made a
5 satisfactory demonstration to give notice to the Commission if it expects to be
6 unable to make its demonstration in the next (four-year-out) planning year “and
7 instead expects to pay a capacity charge.” The Commission finds that this
8 sentence must be read in the context of Section 6w as a whole. Johnson, 492 Mich
9 at 177. There is no entity that could give such notice other than the AES, since
10 only the AES knows whether it intends to provide its customers with sufficient
11 capacity or intends to provide something less. ROA customers are incapable of
12 providing such notice, even though they are the parties that will be paying the
13 charge.

14
15 The Legislature has chosen to make incumbent utilities (which are subject to rate
16 regulation) the capacity suppliers of last resort under Section 6w(7). The capacity
17 charge is a retail rate, designed to recover the incumbent utility’s cost of
18 providing capacity service, to whatever type of customer load – bundled or
19 choice. [11/21/17 Order in MPSC Case No. U-18239, p. 73., internal citation
20 omitted]
21

22 Based on the Commission’s determination, an “electric provider” in this context *must* be
23 an AES, so therefore the capacity charge *must* be the tariffed rates meant to be applied to
24 capacity service, whether provided to an AES customer or a full-service customer. For
25 the reasons discussed previously, to the extent Staff is correct about EM witness Zakem’s
26 implied claims related to this, the claims should be rejected.

27 **Capacity Obligation**

28 Q. What do EM witness Zakem and MNSC witness Jester claim with regard to capacity
29 obligations and how/whether the Company’s customers are served by its generation?

30 A. EM witness Zakem claims that, since MISO started dispatching plants in 2005, “it has not
31 been accurate to think that DTE’s power plants serve DTE’s customers or any other

1 specified group of customers.”⁸ MNSC witness Jester claims that, as the Company
2 participates in MISO, it “is not directly responsible for meeting the power generation
3 requirements of its customers,” and that the Company “buys from MISO all of the power
4 that it sells to its customers and sells all of the power it generates to MISO.”⁹ At least for
5 the application of these ideas to cost allocation and the rates the Company charges, Staff
6 disagrees. As discussed above, the Company has to meet a capacity obligation at MISO
7 by providing ZRCs, and the ZRCs it uses to do so are nearly (if not) all provided by its
8 plants and PPAs. The costs borne by customers through rates are the costs of the PPAs
9 and plants used to produce these ZRCs. Similarly, with the energy used by the
10 Company’s customers, the market construct nets out the LMP for power produced by the
11 Company, only paying for the energy used by customers over the Company’s energy
12 supplied or requiring payment for the inverse. The costs for energy borne by customers
13 in rates is not the LMP but for the small amount of net interchange that occurs as
14 described; it is the cost the Company incurs either to run its plants or under its PPAs. In
15 addition, the Company is required to demonstrate it either owns or has under contract
16 capacity to serve its customers 4 years forward. Therefore, in spite of MISO being in
17 charge of dispatch and the appearance of a market for energy and capacity, what
18 customers pay in rates is effectively the cost of the Company’s owned generation or the
19 generation under its PPAs. It is also worth noting that dispatch is based on the day-ahead
20 bids made by market participants, including the Company, which are based on the costs
21 of running the generation. For this reason, arguments claiming generation capacity and

⁸ EM witness Zakem Direct Testimony, pp. 21-22.

⁹ MNSC witness Jester Direct Testimony, p. 17.

energy actually come from MISO have no value in the determination of the cost the Company's customers' rates are calculated based on, and should not be relied on by the Commission in its determinations.

EV Revenue Treatment and Contributions in Aid of Construction (CIAC)

Q. What do intervening witnesses claim with regard to revenue from EV charging?

A. MNSC witness Jester claims that costs associated with grid upgrades necessary to connect EV chargers should be socialized, as they "can then be paid out of the aggregate new revenue that will be provided by electric vehicle charging across DTE's distribution system."¹⁰ MNSC witness Jester also claims that "electric vehicle charging revenue that exceeds the utility costs of electric vehicle charging support by the utility is a subsidy by electric vehicle drivers to other customers,"¹¹ and that "DTE should assess marginal revenues from EVs on a service territory and system-wide basis."¹² MEIU witness Sherman makes similar claims.¹³ Staff disagrees with these claims. First, it is worth pointing out that these arguments and claims bear a striking resemblance to those made by representatives for large commercial and industrial customers seeking discounted and/or economic development rates. Effectively, the witnesses are arguing that any revenue above the "marginal" cost to serve EV load can (and likely should) be dedicated to further EV programs, and any amount of that revenue that accrues to the benefit of other customers is a subsidy from EV drivers to other customers. This is incorrect for several reasons. In Staff's opinion, the goal of these ratepayer-funded programs should be to maximize the net benefit to all ratepayers as ratepayers. Eliminating or reducing the

¹⁰ MNSC witness Jester Direct Testimony, p. 33.

¹¹ MNSC witness Jester Direct Testimony, p. 40.

¹² MNSC witness Jester Direct Testimony, p. 42.

¹³ MEIU witness Sherman Direct Testimony, pp. 21-23.

1 net benefit by allowing it to accrue to the benefit of EV owners alone is not supportive of
2 this goal; it is, in fact, antagonistic to it. MNSC witness Jester has provided no
3 reasonable support for why non-EV owning ratepayers should subsidize EV owners in
4 pursuit of Michigan's climate goals. In addition, the "marginal" cost of service to a
5 customer has little direct use in the setting of utility rates (or any considerations related
6 thereto) for a number of reasons. First and foremost is that no customer actually pays the
7 "marginal" rate, as rates are determined by spreading the totality of the Company's costs
8 across all usage. Requesting a "marginal" rate, as a large customer might do, or
9 assuming all revenues above "marginal" costs are a subsidy, is effectively asking to not
10 be required to pay or account for the costs of the utility beyond the direct marginal costs,
11 even though *all other customers* must bear those costs. Any customer paying fully-
12 allocated embedded cost rates could claim they were subsidizing others under such a set
13 of assumptions, which highlights how little weight should be given to the claim. In
14 addition, Staff has maintained the view (that the Commission has repeatedly supported)
15 that the goal of the Company's EV programs should be to maximize the net benefit to
16 non-participating customers, as that benefit is the most important justification for these
17 programs to be funded by ratepayers. Claiming all incremental revenues, however
18 defined, is antithetical to this goal and should be rejected. MNSC witness Jester further
19 claims such use of these "incremental" revenues is justified by analogy to CIAC.¹⁴
20 MEIU witness Sherman makes a similar argument, claiming "CIAC costs are typically
21 limited to the amount of marginal revenue not expected to be recovered by the new load.
22 In other words, a customer only has to cover costs up to the amount that they will not be

¹⁴ MNSC witness Jester Direct Testimony, p. 43.

1 contributing over time through the new electricity purchases they will make.”¹⁵ Line
2 extension policies generally allow only a portion of gross margin from expected added
3 usage and load from connecting a customer to be used as an offset to the connection
4 costs. This usually consists of only 2-3 years of expected revenue, often offset by the
5 portion of power supply costs that flow through the Power Supply Reconciliation (PSCR)
6 mechanism as a proxy for incremental power supply costs of the load. For example,
7 DTE’s overhead line extension policy for commercial and industrial customers smaller
8 than 1,000 kW of load uses only 2 years of gross margin to offset extension costs.¹⁶ In
9 addition, to the extent that the costs of necessary distribution upgrades are not covered by
10 the customer installing chargers, they are borne by others and should be considered a cost
11 of the program in determining net benefits. In addition, employing such a limited period
12 of time substantially reduces the concerns associated with exactly how accurate a
13 “marginal” view of costs might be, and ensures that benefits accrue to other customers
14 from the new load. These last two issues will be discussed further in response to cost-
15 benefit analysis arguments made by various witnesses next in my testimony. For the
16 reasons discussed above, the Commission should reject the intervening witnesses’ claims
17 regarding charging revenue.

18 **EV Cost-Benefit Analysis (CBA) and Regressive Taxation**

19 Q. What categories of intervenor claims with regard to the Company’s EV programs’ CBA
20 are you addressing?

¹⁵ MEIU witness Sherman Direct Testimony, p. 11.

¹⁶ Sections C6.2(3)(a)&(b), DTE ELECTRIC COMPANY RATE BOOK FOR ELECTRIC SERVICE, Sheet No. C-29.00.

1 A. I will be addressing claims that fall into the following categories: revenue to be
2 considered, the extent to which social costs and benefits should be considered and
3 appropriate cost tests, and I will also be addressing how funding these programs through
4 utility rates has the same effect as regressive taxation.

5 Q. What do intervenors claim with regard to the amount of revenue from charging to be
6 considered in the CBA?

7 A. MNSC witness Jester claims that all EV charging revenues, rather than the Company's
8 attempt to identify those related to the Company's EV programs, should be considered in
9 the context of a CBA for those programs.¹⁷ Staff disagrees. In addition to the previous
10 discussion on net revenue, the appropriate costs and benefits to consider in a CBA for a
11 ratepayer-funded program are those to ratepayers. Ascribing benefits to usage that would
12 have occurred absent the program is inappropriate. Therefore, the Company's adjustment
13 to remove a reasonable estimate of the revenue from EV charging that would have
14 occurred absent the program is appropriate, and MNSC witness Jester's claim and related
15 requested relief should be denied. MEIU witness Sherman makes a similar claim¹⁸ that
16 should be denied for the same reasons.

17 Q. What claims do intervening witnesses make with regard to appropriate cost tests and the
18 inclusion of societal costs and benefits?

19 A. MNSC witness Jester implies that a ratepayer-impact analysis (a.k.a. the utility cost test
20 [UCT]) inappropriately considers net revenues from charging as a benefit to ratepayers,
21 claiming that it is a transfer payment and not a true benefit in a CBA. Staff disagrees.

¹⁷ MNSC witness Jester Direct Testimony, pp. 42-43.

¹⁸ MEIBC/IEI/AEU witness Sherman Direct Testimony, pp. 21-23.

1 While in a societal cost test (SCT) or total resource cost test (TRC) this may be true, for a
2 participant cost test the revenue would be a cost and for a UCT this revenue would be a
3 benefit (appropriately defined). This fact does not make the UCT or PCT not CBAs; they
4 each just concentrate on the costs and benefits from different perspectives, and any CBA
5 requires a perspective from which to define costs and benefits. MNSC witness Jester
6 goes on to imply that the only true CBA is a SCT.¹⁹ Again, Staff disagrees. Each type of
7 CBA, or perspective from which they are conducted, has value in the Commission's
8 consideration of the programs they are examining. The UCT shows the impact to
9 ratepayers and the utility, which is important for informing whether or not utility rates are
10 the appropriate way to fund a program (along with other considerations discussed later).
11 The PCT, in spite of MNSC witness Jester's dismissal of its necessity,²⁰ is useful in
12 determining whether the program will be attractive to participants. The SCT is useful in
13 determining if there are societal benefits or costs that are not included in the others,
14 providing a more holistic view of the overall CBA, but not the only perspective that
15 should matter to the Commission. In fact, using a CBA that includes societal benefits or
16 costs (such as the SCT) as the sole determining factor of whether or not a given program
17 should be funded by ratepayers would be inappropriate, as it may be more appropriate to
18 fund those programs through governmental (or societal) funding, as that is where the
19 benefits accrue. The reasons this may be more appropriate are discussed throughout this
20 rebuttal, as well as that of Staff witness Krause.

¹⁹ MNSC witness Jester Direct Testimony, pp. 41-42.

²⁰ MNSC witness Jester Direct Testimony, p. 42.

1 Q. MEIU witness Sherman expresses concern that the Company's CBA "fails to account for
2 any of the societal benefits realized as a result of transportation electrification."²¹ Does
3 Staff share this concern?

4 A. While Staff agrees that an SCT or other cost test incorporating societal costs and benefits
5 can provide important information to the Commission, and appreciates the more nuanced
6 discussion MEIU witness Sherman provides regarding appropriate use of the various cost
7 tests previously discussed, as discussed above in response to MNSC witness Jester, such
8 a cost test is not appropriate to use to determine the amount to which such programs
9 should be funded by utility customers regardless of the societal benefits they may
10 produce as discussed throughout this rebuttal, as well as that of Staff witness Krause.

11 Q. How does funding programs for EVs through utility rates, particularly if social benefits
12 are part of the justification for doing so, affect the how the burden of such funding is
13 distributed?

14 A. Income taxes are based on income in two ways; first through the fact that they are based
15 on a percentage of income, and second as the tax rate that applies to increasing levels of
16 income also increases, known as "progressive" taxation. Generally, the effective tax rate
17 increases with income, as does the nominal amount of the tax levied. Indeed, taxes for
18 certain income levels are zero or effectively negative due both to the structure of the tax
19 system and programs such as the earned income tax credit. Income taxes are one of the
20 main ways governments collect revenues, and those revenues are then used to fund
21 programs that, at least theoretically, provide societal benefits or public goods. Utility
22 rates are not currently based on income, but the costs of the Company and customer

²¹ MEIU witness Sherman Direct Testimony, p. 24.

determinants. As a number of witnesses in the instant case have shown, the burden of utility rates increases as income decreases. The effect of this fact is that the burden of funding such programs falls disproportionately on lower income customers, who happen to be the very customers least likely to directly benefit from the current EV programs, at least in the short term. While lower-income customers may share equally (or even receive a disproportionate share of) the benefits such programs can provide to non-participating customers, that would be the case regardless of the method used to fund them, meaning funding through utility rates is still equivalent to regressive taxation as far as the impact to those customers is concerned. Even if rates were based on income, the resulting burden would be more regressive than if it were levied through taxation. The Commission should seriously consider this issue in determining how much funding ratepayers should provide for EV programs.

Choice EV Rebate

Q. MNSC witness Jester claims the Company's proposed discounted EV rebate for choice customers, or those who do not receive their power supply from the Company, is inappropriate as net revenue removes the cost of power supply to calculate net revenue, and net revenue is therefore the same regardless of where the customer acquires their power supply.²² Does Staff agree?

A. No. Given the issues with net revenue as used by MNSC witness Jester discussed previously in this rebuttal, it is not accurate to claim that net revenue is the same between the two groups of customers. It is also worth noting that choice customers are not currently eligible for rebates due to concerns about this issue, and the Company's

²² MNSC witness Jester Direct Testimony, p. 34.

1 proposal represents a reasonable proposal to allow for choice customer EV rebates. For
2 this reason, the opposition to the Company's proposal should be rejected.

3 **EV Charger Make-Ready Costs/CIAC Waiver**

4 Q. What claims do intervening party witnesses make with regard to EV charger make-ready
5 costs and the Company's proposed elimination of the CIAC waiver for EV charger
6 installations (which has the effect of no longer making other customers cover utility make
7 ready costs)?

8 A. MNSC witness Jester claims that use of EV rebates supplied by the Company should be
9 allowed to be applied to both utility and customer "make-ready" costs, at least partially
10 because NEVI funds are not allowed to be used for this purpose, and implying this is a
11 clarification as opposed to a change in policy.²³ Electrify America witness Shah opposes
12 the Company's proposal to eliminate the EV charging CIAC waiver, claiming it
13 "undercuts DTE's goals of expanding public charging infrastructure and reducing range
14 anxiety."²⁴

15 Q. Does Staff agree with these claims or the requested relief?

16 A. Not currently. Allowing rebates to cover make-ready costs, whether utility or customer,
17 has the effect of making sites that are more expensive at which to install a charger
18 relatively more attractive to the detriment of other customers, as they would bear the cost
19 through the rebate recovery rather than the installing customer as under normal CIAC
20 procedures. Additionally, covering customer make-ready costs extends the cost
21 responsibility for other customers beyond what is allowed now, and it is Staff's opinion

²³ MNSC witness Jester Direct Testimony, p. 38.

²⁴ Electrify America Shah Direct Testimony, p. 6.

1 that the justification to do so is insufficient for the reasons given above. These same
2 arguments apply to maintaining the current CIAC waiver for EV charging installations,
3 as the effect of that waiver is other customers paying all utility make-ready costs. In
4 addition, the goal of the Company's programs is not to expand public charging at any
5 cost, it is to maximize the net benefits of EV charging to utility customers, and allowing
6 for more expensive chargers to be installed on other customers' dime is not supportive of
7 this goal. Electrify America witness Shah's claim that this would somehow lead to
8 higher-cost utility-owned chargers and implication that it is therefore anti-competitive are
9 both unfounded and should not be considered. For these reasons, the Commission should
10 reject the proposals to allow EV rebates to cover make-ready costs and approve the
11 Company's removal of the EV Charging CIAC waiver.

12 **The Company's Criteria for DCFC Rebates**

13 Q. What do intervening witnesses claim with regard to the Company's criteria for DCFC
14 rebates?

15 A. Intervening witnesses make a number of such claims. Electrify America witness Davis
16 takes issue with the Company's proposed 97% uptime requirement, stating the primary
17 concern is with potential anti-competitive applications of the requirement.²⁵ Specifically,
18 Electrify America witness Davis claims that, as the Company may at some point in the
19 future install chargers it owns, the collection of uptime data (which the witness claims is
20 "confidential and competitively sensitive") could provide the Company a competitive
21 advantage.²⁶ In Staff's opinion, this concern relies on a number of speculative future

²⁵ Electrify America witness Davis Direct Testimony, p. 4.

²⁶ Electrify America witness Davis Direct Testimony, pp. 4-5.

1 events, and is not outweighed by the benefit of those receiving rebates funded by
2 ratepayers to install chargers showing that those rebates have not been wasted. For this
3 reason, the Commission should reject the concern and approve the requirement.

4 Electrify America witness Davis also expresses a desire for “destination” DCFCs
5 to not be excluded from receiving rebates as proposed by the Company, claiming that
6 previous deployments of DCFCs by businesses partnered with Electrify America have
7 been beneficial for both parties, and that the effect would be to “artificially” limit DCFC
8 sites.²⁷ First, whether rebates funded by ratepayers for DCFCs are good for those who
9 would otherwise have to pay for them out-of-pocket and/or the companies selling
10 chargers is not of primary concern to Staff, nor should it be to the Commission. The
11 concern should be maximizing net benefits to non-participating customers. Second, the
12 limit is not “artificial”; it is removing rebates for sites that are not necessary to achieve
13 the goal of a skeleton network to reduce range anxiety to gain the benefit of home
14 charging, which assists in achieving the actual goal.

15 EVgo witness Stegall expresses concern that the Company’s proposal to no longer
16 provide rebates to destination chargers “could result in the inequitable distribution of
17 chargers in DTE’s service territory, especially for multifamily housing residents and
18 others who rely on public charging,” and that “it could limit program participation.”²⁸
19 EVgo witness Stegall also claims a “need” for the Company’s programs to serve those
20 who cannot charge at home, claims the Company did not properly support the proposal,
21 and claims “a successful program that effectively drives charging infrastructure

²⁷ Electrify America witness Davis Direct Testimony, pp. 6-7.

²⁸ EVgo witness Stegall Direct Testimony, p. 3.

1 deployment will maximize DTE ratepayer benefits.”²⁹ As discussed in response to
2 Electrify America witness Shah, limiting program participation to that most beneficial to
3 other ratepayers is a feature, not a bug, of the Company’s proposal. In addition, those
4 who rely exclusively on public DCFC charging are not producing the very benefit that is
5 produced by the residential EV program and basically the entire reason for ratepayers
6 funding the program in the first place, spreading out of costs through off-peak charging,
7 and should therefore not receive rebates regardless of what other sites that do assist in
8 providing these benefits are allowed the rebates. In essence, the claim that driving
9 infrastructure development without concern for the benefits produced does the opposite
10 of what the witness claims. Rather than maximizing ratepayer benefits, it dilutes them by
11 paying for chargers that do not produce them. In Staff’s opinion, regardless of the
12 Company’s support for the proposal, that is sufficient reason to approve it.

13 MEIU witness Sherman also expresses concern about eliminating “destination”
14 DCFCs’ eligibility for rebates, specifically that there may be certain places where a
15 “destination” charger acts more as an on-route charger. The Company’s focus on on-
16 route DCFC charging, in effect creating a skeleton network of DCFCs to reduce range
17 anxiety, is completely appropriate and consistent with the goals of the Company’s EV
18 programs. In Staff’s opinion MEIU witness Sherman’s concern is potentially valid, but
19 as it is speculative with no actual examples of the situation described occurring, it is
20 insufficient to deny the Company’s proposal and the associated benefits. Should the
21 hypothetical become real, there will be plenty of opportunity to rectify the issue prior to it

²⁹ EVgo witness Stegall Direct Testimony, p. 8-10, 15.

becoming a real problem. For these reasons, the request to supply rebates to destination DCFCs should be rejected.

Low-Income EV Rebate Income Level

Q. AA witness Stults proposes increasing the eligible income level for the Company's income-qualified Home Charger Rebates to 300%³⁰ or 400%³¹ of the federal poverty level from the current 200%, claiming providing such rebates only for families of four making less than \$60,000³² is insufficient.³³ Does Staff agree?

A. No. Staff does not agree it is appropriate that households of four persons making nearly or above \$100,000 a year is consistent with the spirit of the income-qualified rebate. For reference, the median income for a family of 4 in Michigan is approximately \$100,000.³⁴ This proposal should be rejected.

Q. Does this conclude your testimony?

A. Yes, it does.

³⁰ 2024 FPL for family of four = \$31,200 times 3 = \$93,600

³¹ 2024 FPL for family of four = \$31,200 times 4 = \$124,800

³² 2024 FPL for family of four = \$31,200 times 2 = \$62,400

³³ AA witness Stults Direct Testimony, pp. 28-29.

³⁴ U.S. DOJ, https://www.justice.gov/ust/eo/bapcpa/20220401/bci_data/median_income_table.htm

1 MR. ORRIS: Staff moves to bind in the
2 Revised Testimony of Shannon Rueckert, consisting of a
3 cover sheet and ten pages of qualifications, questions,
4 and answers. Witness Rueckert also sponsored the
5 following exhibits: A-11 Schedule A1.1, Revised S-14.0,
6 Revised S-14.1, Revised S-14.2, Revised S-14.3, and
7 Revised S-14.4.

8 JUDGE WALLACE: Is there any objection to
9 binding in the revised direct testimony of Ms. Rueckert?

10 Hearing none, the testimony is bound in.

11 Is there any objection to the admission
12 of Exhibit, what is it, S-11.

13 MR. ORRIS: A-11 Schedule A-1.1.

14 JUDGE WALLACE: Oh, O.K. A-11, inclusive
15 of all -- we may have already admitted that. O.K. A-11
16 and associated schedules, as well as revised exhibits,
17 all of these exhibits were revised, 14.0, 14.1, 14.2.
18 Was there a 14.3?

19 MR. ORRIS: Correct.

20 JUDGE WALLACE: And 14.4.

21 Hearing none, those exhibits are
22 admitted.

23 (Testimony bound in.)

24 - - -

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the application of)
DTE ELECTRIC COMPANY)
for authority to increase its rates, amend)
its rate schedules and rules governing the)
distribution and supply of electric energy, and)
for miscellaneous accounting authority.)

Case No. U-21534

QUALIFICATIONS AND REVISED DIRECT TESTIMONY OF
SHANNON RUECKERT
MICHIGAN PUBLIC SERVICE COMMISSION

~~July 26, 2024~~

July 29, 2024

1 Q. Please state your name and business address.

2 A. My name is Shannon Rueckert. My business address is 7109 W. Saginaw Hwy, Lansing,
3 MI 48917.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission (MPSC or Commission) as
6 an auditor in the Revenue Requirements section.

7 Q. How long have you been employed by the Commission?

8 A. I have been employed since February of 2018.

9 Q. What is your educational and professional background?

10 A. I previously served in the US Air Force as a Fuels Resource Controller, responsible for
11 controlling base wide fuels operations and accounting. My duties included daily close out
12 and reconciliation of all fuel transactions. After serving in the Air Force, I managed a
13 family business. While general manager of the business I performed all managerial
14 accounting functions. In 2015, I graduated from the University of Michigan with a
15 Bachelor of Business Administration and a concentration in accounting degree with High
16 Honors. I was previously employed at Andrew's Hooper Pavlik, PLC as a staff
17 accountant where I performed tax preparation and audits of municipalities, retirement
18 plans, and banks. In April of 2019 I completed the Master of Business Administration
19 program, with a concentration in accounting, at the University of Michigan. I have been
20 involved in rate case audits and performed audit work in the following cases:

21	<u>Case No.</u>	<u>Company / Type of Case</u>
22	U-20276	Upper Peninsula Power Company Electric Rate Case
23	U-20286	Consumers Energy Company's Tax Cuts and Jobs Act (TCJA) Credit B

1	U-20322	Consumer's Energy Gas Rate Case
2	U-20359	Indiana Michigan Company Electric Rate Case
3	U-20642	DTE Gas Rate Case
4	U-20650	Consumer's Energy Gas Rate Case
5	U-20697	Consumer's Energy Electric Rate case
6	U-20940	DTE Gas Rate Case
7	U-20963	Consumer's Energy Gas Rate Case
8	U-21045	Alpena Electric Company
9	U-21097	NSP Electric Company
10	U-21148	Consumer's Energy Electric Rate Case
11	U-21194	Detroit Thermal Transfer of Control Case
12	U-20836	DTE Electric Rate Case
13	U-21224	Consumer's Energy Electric Rate Case
14	U-21286	Upper Peninsula Power Company Electric Rate Case
15	U-21308	Consumer's Energy Gas Rate Case
16	U-21366	Michigan Gas Utilities
17	U-21389	Consumer's Energy Electric Rate Case
18	U-21461	Indiana Michigan Company Electric Rate Case
19	U-21490	Consumer's Energy Gas Rate Case
20	U-21291	DTE Gas Rate Case
21	U-21540	Michigan Gas Utilities
22	U-21555	Upper Peninsula Power Company Electric Rate Case
23		

1 Q. What is the purpose of your testimony?

2 A. The purpose of my testimony is to present Staff's adjustment to the Return on Tree Trim
3 Regulatory Asset. Also, I will present Staff's Uncollectible Accounts, Injuries &
4 Damages, Employee Savings Plan, Active Healthcare, and Other Employee Benefits
5 expenses.

6 Q. Are you sponsoring exhibits?

7 A. Yes.

8 Exh. Schedule Title

9 A-11 A-1.1 Tree Trim Regulatory Asset - Return On.

10 ~~S-15.0~~ ~~S-14.0~~ N/A Projected Accounts 904, 925, and 926 Expenses
11 for the Projected Test-Period Ending December 31,
12 2025.

13 ~~S-15.1~~ ~~S-14.1~~ N/A Uncollectible Accounts Expense for the Projected
14 Test-Period Ending December 31, 2025.

15 ~~S-15.2~~ ~~S-14.2~~ N/A Injuries & Damages Expense Normalization.

16 ~~S-15.3~~ ~~S-14.3~~ N/A Employee Savings Plan, Active Healthcare,
17 and Other Benefits Expense Projections for the
18 Projected Test-Period Ending December 31, 2025.

19 ~~S-15.4~~ ~~S-14.4~~ N/A Employee Savings Plan, Active Healthcare
20 Expense, and Other Benefits Average Annual
21 Growth Rates (AAGR).

22 Q. Please describe Exhibit A-11, Schedule A-1.1.

23 A. Exhibit A-11, Schedule A1.1, identifies the return on the Tree Trim Regulatory Asset for
24 the Projected Test-Period Ending December 31, 2025.

1
2 Q. Please describe Exhibit ~~S-15.0~~ S-14.0.

3 A. Exhibit ~~S-15.0~~ S-14.0 presents Staff's projections for FERC accounts 904, 925, and 926
4 expenses for the Projected Test-Period Ending December 31, 2025. The projections were
5 developed through the category listed in column (a.). Column (b.) presents the
6 Company's projection and column (d.) presents Staff's projection, with a difference
7 shown in column (c.). The differences in column (c.) represent Staff's adjustments and
8 are supported by corresponding exhibits and Commission Staff listed in column (e.).

9 **Return on Tree Trim Regulatory Asset**

10 Q. What rate of return did the Company use to calculate its return on the Tree Trim
11 Regulatory Asset?

12 A. The Company used its Rate of Return on Permanent Capital of 9.2%. See the Direct
13 Testimony of Kirk M. Vangilder, page 16, and Exhibit A-14, Schedule D1. This
14 produced a return on the Tree Trim regulatory asset of \$18,786,000 shown on Company
15 Exhibit A-11, Schedule A1.1.

16 Q. Has the Company been approved to use the Rate of Return on Permanent Capital?

17 A. No. In Order case U-21297, page 280, the Commission found that the program "should
18 remain as it is" and use the short-term debt rate to calculate the return on the Tree Trim
19 regulatory asset.

20 Q. What rate did Staff use to calculate the Return on Tree Trim Regulatory Asset?

21 A. Staff, consistent with the Commission's Order in case U-21297, used the short-term debt
22 rate of 4.96% presented on Exhibit S-4, Schedule D3, and supported by Staff witness
23 Ufolla. This creates a return on Tree Trim regulatory asset of \$10,133,000. Staff

1 recommends the Commission continue to use the short-term debt rate authorized in Order
2 case U-21297, page 280.

3 **Uncollectible Accounts Expense**

4 Q. Does Staff support the Company's projected uncollectible accounts expense (UCX)?

5 A. No. While the Company's methodology is consistent with Staff's direct write off method,
6 the revenue amount used is excessive. Revenue is multiplied by the bad debt loss ratio
7 (BDLR) to create the expense projection. See Exhibit A-13, Schedule C5.8. Staff
8 requested the revenue categories that compose its projection. An excessive revenue
9 amount creates an unreasonable UCX projection. The Company responded that its UCX
10 calculation uses Total Proposed Revenue presented on Exhibit A-16, Schedule F2,
11 column c. Also it included the addition of PSCR revenue not presented on Company
12 exhibits. Staff disagrees with the use of the proposed revenue. Use of future revenue at
13 proposed rates creates an iterative calculation for the Cost-of-Service study. Also, using
14 projected revenue at the Company's proposed rates creates an excessive UCX projection.
15 It is unlikely the Company's proposed rates will be approved without recommended
16 adjustments. It is also Staff's position that PSCR revenue should be excluded as it is not
17 present on the Company's exhibits and audited by Staff in this general rate case. Staff
18 recommends the use of total current revenue projected by test year billing determinants at
19 the current known rates, as presented on Exhibit A-16 Schedule F2, page 2, col. b., ln. 49.
20 Projected revenue at the current known rates creates a more reasonable UCX projection
21 which is not iterative regarding the Cost-of-Service study.

22 Q. What method did Staff use to project the Company's uncollectible accounts expense?

1 A. Staff requested the Company update its projection to include 2023. This provides the
2 most current information available using the direct write-off method. Staff then applied
3 the BDLR from years 2021 through 2023 to total present revenue amount sourced from
4 Company Exhibit A-16 F2, page 2, col. b., ln. 49. Staff projects an uncollectible expense
5 projection of \$41,029,000 a downward adjustment of \$9,841,000 from the Company's
6 request of \$50,870,000. See Exhibit ~~S-15.0~~ S-14.0. Staff's direct write off method, which
7 was also used by the Company, is shown on Exhibit ~~S-15.1~~ S-14.1.

8 **Injuries & Damages Expense**

9 Q. What method did the Company use to project its Injuries & Damages expense?

10 A. The Company used the normalization method approved in Case No. U-21297 and prior
11 cases. See the Direct Testimony of witness Uzenski, page 51. Staff requested the
12 Company update its projection to include 2023 as it's the most recent year available. See
13 Staff Exhibit ~~S-15.2~~ S-14.2. Updating the Company's projection to include 2023 results
14 in an Injuries & Damages projection of \$15,577,000 a downward adjustment of
15 \$2,863,000 from the Company's request of \$18,440,000. See Exhibit ~~S-15.0~~ S-14.0.

16
17 **Employee Savings Plan Expense (ESP)**

18 Q. What method did the Company use to project its Employee Savings Plan Expense (ESP)
19 expense?

20 A. The Company used "the annual increase in the Company's Employee Savings Plan costs
21 for the years 2017 through 2020 of 7.50%." The calculation of this rate excludes years
22 2021 and 2022. Witness Cooper cited an "abnormally high level of forfeitures arising
23 from employee resignations in 2021" as reason for exclusion. See the direct testimony of
24 M. S. Cooper, page 17.

1 Q. Does Staff agree with the Company's reasons for excluding 2021 and 2022 from its
2 average annual growth rate (AAGR) calculation?

3 A. No. Staff requested that the Company provide ESP expense for year 2023. The
4 downward trend of annual change continued in 2023. This is not indicative of a non-
5 recurring item and reason for exclusion. See Exhibit ~~S-15.4~~ S-14.4, line 6. It is Staff's
6 position that the consistent consecutive diminishing growth trend shows that witness
7 Cooper's reasons for excluding 2020 and 2021 from its AAGR are not valid. ESP
8 expense growth continues to decline for five consecutive years. Consistent annual
9 changes the Company experiences should be reflected in expense projections of its rate
10 cases.

11 Q. What method did Staff use to project its ESP expense?

12 A. Staff used a five-year AAGR based on the Company's historic expenses. The annual
13 change in ESP expense from years 2019-2023 produces a 4.06% AAGR. See Staff
14 Exhibit ~~S-15.4~~ S-14.4, line 7. The rate was applied to historic year 2023 resulting in a
15 projection of \$29,547,000 a reduction of \$7,859,000 from the Company's projection of
16 \$37,406,000. See Exhibit ~~S-15.3~~ S-14.3, line 1, and Exhibit ~~S-15.0~~ S-14.0, line 3.

17 **Active Healthcare**

18 Q. What method did the Company use to project its Active Healthcare expense?

19 A. The Company adjusted its historic base year with the "constant dollar" adjustment
20 described on page 23 of witness Cooper's testimony. This method has been consistently
21 rejected by the Commission for healthcare projections. It then projects the adjusted
22 historic expense forward with adjusted annual increase trends provided by independent
23 healthcare experts Willis Towers Watson (WTW). These increase trend factors are 5.1%

1 in 2023, 5.0% in 2024, and 4.0% in 2024. See the direct testimony of M. S. Cooper, page
2 28. Application of these factors resulted in an expense projection of \$56,083,000.

3 Q. Does Staff agree with the Company's use of WTW's adjusted trend factors to project the
4 expense?

5 A. No. The Company testified that its Active Healthcare expense is volatile. See the direct
6 testimony of M. S. Cooper page 20. Contrary to witness Cooper's testimony, the WTW's
7 generalized healthcare trends are not reflective of volatility in the Company's expense
8 history. The Company's AAGR for total Active Healthcare is 4.83%. See Exhibit ~~S-15.4~~
9 ~~S-14.4~~, line 7. The Company uses a blended rate of inflation for this volatile expense and
10 unnecessarily conflate the projection method with its "constant dollar" adjustment to the
11 historic year to produce an excessive projection.

12 Q. What method does Staff recommend for projecting the expense forward?

13 A. Staff requested total healthcare expense and employee headcount for 2023. Then a per
14 person AAGR of 4.83%, calculated from the Company's own change in Active
15 Healthcare was applied to its unadjusted historic test year total expense to project it
16 forward. The total projected cost is multiplied by the Company's expense percentage as a
17 portion of it is capitalized. This is presented on Exhibit ~~S-15.3~~ ~~S-14.3~~, line 6 and results
18 in an Active Healthcare expense projection of \$53,749,000. A reduction of \$2,334,000
19 from the Company's projection of \$56,083,000.

20 **Other Employee Benefits – General Benefits & Administrative Fees**

21 Q. Please describe the Company's method for projecting General Benefits and
22 Administrative Fees in the Other Employee Benefits category of account 926 shown on
23 Company Exhibit A-13, Schedule C5.11, page 2.

1 A General Benefits and Administrative Fees fee were escalated at the overall rate of
2 inflation as measured by the Consumer Price Index through the end of the projected test
3 year. See the Direct Testimony of Company witness Cooper, page 38.

4 Q. Are the inflation rates used by the Company reflective of the expense history in these line
5 items of Other Benefits expense?

6 A. No. The Company has seen a steady decrease in General Benefits expense for five
7 consecutive years. Administrative Fees has seen some volatility. However, the expense
8 has decreased more often than not in the last five years. Both line items have a negative
9 five-year AAGR as shown on Exhibit ~~S-15.4~~ S-14.4, lines 28 and 31. Using general
10 inflation to increase expenses that have a negative AAGR creates an unreasonable
11 projection and disincentives the Company from continuing to reduce the costs of these
12 line items.

13 Q. What method does Staff recommend for projecting the expense forward?

14 A. Staff recommends using the AAGR of General Benefits and Administrative Fees based
15 on a five-year average annual change in the expenses shown on Exhibit ~~S-15.4~~ S-14.4
16 This method produces an AAGR of -10.24% for General Benefits, and -5.57% for
17 Administrative Fees. Applying these rates to 2023 expenses provided to Staff by the
18 Company projects a General Benefits expense of \$1,051,000 and Administrative Fees
19 expense of \$4,708,000 shown on Staff Exhibit ~~S-15.3~~ S-14.3, lines 7 and 9.

20 Q. Please summarize your recommendations.

21 A. First, Staff is recommending the return on the Tree Trim regulatory asset use Staff's
22 Short-term debt rate of 4.96% supported by witness Ufolla. This creates a return on the
23 Tree Trim regulatory asset of \$10,133,000.

1 Second, Staff recommends an Injuries and Damages expense projection of \$15,577,000.

2 A decrease of \$2,863,000 from the Company's request of \$18,440,000.

3 Third, Staff recommends an Uncollectible Accounts expense projection of \$41,029,000
4 for the 12-month period ending December 31st, 2025. A decrease of \$9,841,000 from the
5 Company's request of \$50,870,000. This projection is based off a three-year average
6 BDLR from 2021-2023 applied to the Company's present revenue projection.

7 Fourth, Staff is recommending an Employee Savings Plan projection of \$29,547,000. A
8 decrease of \$7,859,000 from the Company's request of \$37,406,000. Staff's projection is
9 based off the average annual growth rate from years 2019-2023 applied to a historic year
10 2023 expense.

11 Fifth, Staff is recommending an Active Healthcare expense projection of \$53,749,000 for
12 the 12-month period ending December 31st, 2025. A decrease of \$2,334,000 from the
13 Company's request of \$56,083,000. Staff's projection is based off the per person average
14 annual growth rate the Company realized and applied to the historic year 2023.

15 Sixth, Staff is recommending a General Benefits expense of \$1,051,000 for the 12-month
16 period ending December 31st, 2025. A decrease of \$1,344,000 from the Company's
17 request of \$2,395,000. Staff's projection is based off the negative annual growth rate the
18 Company realized and applied to the historic year 2023.

19 Lastly, Staff is recommending an Administrative Fees expense of \$4,708,000 for the 12-
20 month period ending December 31st, 2025. A decrease of \$2,855,000 from the
21 Company's request of \$7,296,000. Staff's projection is based off the negative annual
22 growth rate the Company realized and applied to the historic year 2023.

23 Q. Does this complete your testimony?

1 MR. ORRIS: Staff moves to bind in the
2 Revised Direct Testimony of Michelle L. Schreur,
3 consisting of a cover sheet and five pages of
4 qualifications, questions, and answers. Ms. Schreur also
5 sponsored Exhibit S-3 Schedule C5.

6 JUDGE WALLACE: All right. Is there --
7 we've already admitted Exhibit S-3 in its entirety. Is
8 there any objection to binding in the revised direct
9 testimony of Ms. Schreur?

10 Hearing none, that testimony is bound in.

11 (Testimony bound in.)

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STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the application of	)	
DTE ELECTRIC COMPANY	)	
for authority to increase its rates, amend	)	Case No. U-21534
its rate schedules and rules governing the	)	
distribution and supply of electric energy, and	)	
<u>for miscellaneous accounting authority</u>	)	

QUALIFICATIONS AND DIRECT TESTIMONY OF
MICHELLE L. SCHREUR
MICHIGAN PUBLIC SERVICE COMMISSION

1 Q. Please state your name and business address.

2 A. My name is Michelle L. Schreur and my business address is 7109 West Saginaw
3 Highway, Lansing, MI 48917.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission (MPSC or
6 Commission) as Manager of the Income Analysis Unit in the Revenue
7 Requirements Section of the Regulated Energy Division.

8 Q. Please describe your educational background.

9 A. I graduated from Grand Rapids Community College in 2015 with an Associate
10 Degree in Business Administration. In 2017, I graduated from Grand Valley State
11 University with a Bachelor of Business Administration Degree in Accounting and
12 Finance. In September of 2017, I attended a Utility Business Model/Financial
13 Valuation Training hosted by Michigan State University Institute of Public
14 Utilities (MSU IPU). In August of 2018, I attended a fundamental and
15 intermediate Annual Regulatory Studies Program hosted by MSU IPU.

16 Q. Please describe your professional background with the MPSC.

17 A. I began my employment with the MPSC in September of 2017 as an auditor in the
18 Revenue Requirements Section of the Regulated Energy Division. In that
19 position my responsibilities included, but were not limited to, performing rate
20 case audits using the financial and operating records of regulated utilities,
21 applicable laws, regulations, and Commission policies to determine the necessity
22 of rate relief. In August 2022, I was promoted to my current position as Manager

1 of the Income Analysis Unit in the Revenue Requirements Section of the
2 Regulated Energy Division.

3 Q. Have you previously sponsored testimony under the name Michelle L. Edelyn?

4 A. Yes.

5 Q. Have you previously sponsored testimony before the Michigan Public Service
6 Commission?

7 A. Yes. I have sponsored testimony in the following cases:

8	<u>Case Number</u>	<u>Company</u>	<u>Case Type</u>
9	U-18424	Consumers Energy Co.	Gas Rate Case
10	U-18999	DTE Gas Co.	Gas Rate Case
11	U-20162	DTE Electric Co.	Electric Rate Case
12	U-20276	Upper Peninsula Power Co.	Electric Rate Case
13	U-20322	Consumers Energy Co.	Gas Rate Case
14	U-20479	SEMCO Energy Gas Co.	Gas Rate Case
15	U-20561	DTE Electric Co.	Electric Rate Case
16	U-20563	Consumers Energy Co.	DR Reconciliation
17	U-20650	Consumers Energy Co.	Gas Rate Case
18	U-20940	DTE Gas Co.	Gas Rate Case
19	U-20836	DTE Electric Co.	Electric Rate Case
20	U-21286	Upper Peninsula Power Co.	Electric Rate Case
21	U-21308	Consumers Energy Co.	Gas Rate Case
22	U-21389	Consumers Energy Co.	Electric Rate Case

23

1	U-21461	Indiana Michigan Power Co.	Electric Rate Case
2	U-21540	Michigan Gas Utilities	Gas Rate Case
3	U-21555	Upper Peninsula Power Co.	Electric Rate Case

1 Q. What is the purpose of your testimony?

2 A. The purpose of my testimony is to present MPSC Staff's (Staff) overall
3 Operations and Maintenance (O&M) Expense Projection for the 12-month period
4 ending December 31, 2025 (projected test year) in the instant DTE Electric
5 Company (DTE or the Company) rate case.

6 Q. Are you sponsoring any exhibits in this proceeding?

7 A. Yes, I am sponsoring the following exhibits:

8 S-3 Schedule C-5: Projected Operations and Maintenance (O&M) Expense
9 for Test Year Ending December 31, 2025

10 Q. Were these exhibits prepared by you or under your direction?

11 A. Yes.

12

13 **Projected O&M Expense**

14 Q. Please describe Exhibit S-3, Schedule C-5.

15 A. Exhibit S-3, Schedule C-5, presents Staff's O&M Expense Projection of
16 \$1,161,521,000 for the 12-month period ending December 31, 2025, a decrease of
17 \$105,429,000 from the total Company's projection of \$1,266,950,000. Staff's
18 projections were developed through the categories listed in column (a). Column
19 (c) presents the Company's Projection and column (e) presents Staff's Projection,
20 with the difference shown in column (d). The differences in column (d) represent
21 Staff adjustments and are supported by corresponding Sources listed in column
22 (b). A reconciliation by Expense, Account, Amount, and Witness is shown at the
23 bottom of the exhibit.

- 1 | Q. Does this conclude your testimony?
- 2 | A. Yes.

1 MR. ORRIS: Staff moves to bind in the
2 Direct Testimony of Joseph E. Ufolla, consisting of a
3 cover sheet and 22 pages of qualifications, questions,
4 and answers. Mr. Ufolla also sponsored the following
5 exhibits: S-4 Schedule D1, S-4 Schedule D2, S-4 Schedule
6 D3, S-4 Schedule D4, S-4 Schedule D5, and S-13.

7 JUDGE WALLACE: Is there any objection to
8 binding in the direct testimony of Mr. Ufolla?

9 Hearing none, the testimony is bound in.

10 Is there any objection to the admission
11 of Exhibit S-4 and all associated schedules?

12 Hearing none, that exhibit is admitted.

13 MR. ORRIS: And the admission of S-13?

14 JUDGE WALLACE: I'm sorry?

15 MR. ORRIS: There was also Exhibit S-13
16 that he sponsored.

17 JUDGE WALLACE: Oh, O.K. S-13. Is there
18 any objection to the admission of Exhibit S-13?

19 Hearing none, that exhibit is admitted.
20 My apologies, Mr. Orris.

21 (Testimony bound in.)

22 - - -

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of	)	
DTE ELECTRIC COMPANY	)	
for the authority to increase its rates, amend	)	Case No. U-21534
its rate schedules and rules governing the	)	
distribution and supply of electric energy, and	)	
<u>for miscellaneous accounting authority</u>	)	

QUALIFICATIONS AND DIRECT TESTIMONY OF

JOSEPH E. UFOLLA

MICHIGAN PUBLIC SERVICE COMMISSION

1 Q. Please state your name and business address.

2 A. My name is Joseph E. Ufolla and my business address is 7109 West Saginaw
3 Highway, Lansing, MI.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission ("MPSC" or
6 "Commission") as a financial analyst in the Revenue Requirements Section of the
7 Regulated Energy Division.

8 Q. Please describe your educational and other professional qualifications.

9 A. I graduated from Oakland Community College in 2016 with an Associate Degree
10 in Business Administration. In 2018, I graduated from Cleary University with a
11 Bachelor of Business Administration Degree in Accounting and Finance. In
12 October 2018, I attended courses in Utility Credit Markets and Ratings and Utility
13 Stock Valuation as part of the Institute of Public Utilities Advanced Regulatory
14 Studies Program at Michigan State University. In August 2019, I attended the
15 Institute of Public Utilities Fundamental Studies Program at Michigan State
16 University. In October 2019 I attended the Essentials of Regulatory Finance
17 conference at Georgetown University hosted by S&P Global.

18 Q. Please describe your professional background with the MPSC.

19 A. I began my employment with the MPSC in August of 2018, as a financial analyst,
20 in the Revenue Requirements Section of the Regulated Energy Division. My
21 primary responsibilities include, but are not limited to, reviewing, analyzing, and
22 making recommendations regarding utility capital structure and development,

1 debt and equity costing, and business and credit risk analysis in rate case
 2 proceedings.

3 Q. Have you sponsored testimony in any MPSC cases prior to this case?

4 A. Yes, I have sponsored testimony in the following cases:

	<u>Case Number</u>	<u>Company Name</u>	<u>Description</u>
5	U-20276	Upper Peninsula Power Co.	Short-Term Debt/Inflation
6	U-20322	Consumers Energy Co. (Gas Div.)	Capital Structure
7	U-20479	SEMCO Energy Gas Company	Cost of Capital
8	U-20561	DTE Electric Company	Capital Structure
9	U-20642	DTE Gas Company	Cost of Capital
10	U-20940	DTE Gas Company	Cost of Capital
11	U-20836	DTE Electric Company	Cost of Capital
12	U-21297	DTE Electric Company	Cost of Capital
13	U-21461	Indiana Michigan Power Company	Cost of Capital
14	U-21291	DTE Gas Company	Cost of Capital
15	U-21555	Upper Peninsula Power Company	Cost of Capital
16			

1 Q. What is the purpose of your testimony in this proceeding?

2 A. The purpose of my testimony is to provide recommendations on behalf of the
3 Michigan Public Service Commission Staff (“Staff”) regarding DTE Electric
4 Company’s (“DTE,” “DTE Electric,” or the “Company”) capital structure
5 balances and corresponding cost rates.

6 Q. Are you sponsoring any exhibits on behalf of Staff in this proceeding?

7 A. Yes, I am sponsoring the following exhibits:

8	<u>Exhibit</u>	<u>Schedule</u>	<u>Title</u>
9	S-4	D-1	Capital Structure and Overall Rate of Return
10	S-4	D-2	Forecasted Long-Term Debt Balance and Cost Rate
11	S-4	D-3	Forecasted Short-Term Debt Balance and Cost Rate
12	S-4	D-4	Forecasted Preferred Stock Balance and Cost Rate
13	S-4	D-5	Forecasted Equity Balance and Cost Rate
14	S-13		Audit/Discovery Responses and Credit Opinion

15 Q. Were these exhibits prepared by you or under your direction?

16 A. Yes.

17

1 Q. Please summarize Staff's overall rate of return recommendation.

2 A. Staff recommends an overall rate of return 5.66%. This recommendation is
3 comprised of a 9.90% return on equity ("ROE") and a common equity ratio of
4 50%. Staff's overall rate of return is premised on the Company's capital structure
5 forecast and then adjusted for any known, anticipated, and/or reasonable changes
6 in the test year ending December 31, 2025. In determining the ratemaking cost of
7 capital, I rely on a mixture of balances and cost rates provided by the Company
8 and by Staff.

9 Q. How is your testimony organized?

10 A. My testimony is split into three sections. The first covers Staff's recommendation
11 on capital structure balances, the second covers Staff's recommendation on
12 capital structure cost rates excluding equity, and the third covers Staff's
13 recommendation on cost of equity (or return on equity).

14 **Capital Structure Balances**

15 Q. Please summarize the recommended ratemaking capital structure balances of Staff
16 and the Company.

17 A. Chart 1 outlines the ratemaking capital structure recommendations by Staff and
18 the Company:
19

Chart 1: Capital Structure Balances

Component	Company (000)	Staff (000)
Long-Term Debt	\$ 8,663,922	\$ 8,663,922
Preferred Stock	0	0
Common Equity	8,673,528	8,673,528
Short-Term Debt	509,454	509,454
Deferred Income Tax	4,229,600	4,229,600
Job Development Investment Tax Credits	31,485	31,485
Total Capital Structure	<u>\$22,107,989</u>	<u>\$22,107,989</u>

Q. Did Staff make any adjustments to the Capital Structure balances provided by the Company?

A. No, Staff did not make any adjustments.

Q. What is the Company's current Credit rating?

A. The Company currently has a credit rating of A- from S&P, Aa3 from Moody's, and A+ from Fitch. These are all well above the minimum threshold of BBB/Baa to be considered investment grade credit ratings. The parent company, DTE Energy, has lower credit ratings across the board, but still maintains an investment grade rating from each of the three rating agencies.

Q. Is there any risk of the Company losing access to debt markets?

A. It is extremely unlikely. Both S&P and Fitch cite the parent company's (DTE Energy) credit rating as a primary factor that could lead to a downgrade. Although all three agencies cite deterioration of FFO/Debt (CFO/Debt) as a factor, only Moody's metrics show the Company near a downgrade threshold and as the Moody's rating is significantly higher than that from S&P or Fitch, this is not a

major concern. Even if after a downgrade (or two) from any rating agency, the Company would still maintain investment grade. In summary, the Company has strong financial metrics that allow it reliable access to debt markets. The Credit Opinions have been included in Exhibit S-13 pages 3-32.

Capital Structure Cost Rates

Q. Please summarize the recommended cost rates of Staff and the Company.

A. Chart 2 outlines the cost rates recommended by Staff and the Company:

Chart 2: Capital Structure Component Cost Rates

Component	Company	Staff
Long-Term Debt	4.24%	4.21%
Preferred Stock	N/A	N/A
Common Equity	10.50%	9.90%
Short-Term Debt	5.76%	4.96%
Deferred Income Tax	0.00%	0.00%

Q. Please explain the difference between the recommended Cost of Capital provided by Staff and the Company.

A. The difference between the Company and Staff's recommended Cost of Capital is due to difference in Long-Term Debt rate, Short-Term Debt rate, and Cost of Equity. Staff's adjustment to the Company's debt rates are outlined below, and Cost of (Return on) Equity is discussed in the next section.

Q. Please explain the difference between the recommended Long-Term Debt Rates provided by Staff and the Company.

A. The difference in the Long-Term Debt rate recommendations from the Company and Staff are due to Staff updating the Company's now historic debt issuances

1 and projected interest rates on the bonds to be issued in 2025. Staff updated the
2 issuance originally labelled "2024 Series A" (Exhibit A-14 Schedule D2) with the
3 actual figures provided in audit which can be found on Exhibit S-13 pages 1-2.

4 For future issuances the Company projects an interest rate of 5.62% for both
5 future issuances. The Company's figures are derived from a projected treasury
6 rate plus a historical 148 basis point spread.¹

7 Staff updates this figure utilizing projected treasury rates of 3.85% from IHS
8 Markit and applying the same 148 basis point spread. Staff's figures are simply an
9 update to the Company's figures using more recent projections. The details can be
10 found on Exhibit S-4 Schedule D-2.

11 Q. Please explain the difference between the recommended Short-Term Debt Rates
12 provided by Staff and the Company.

13 A. The difference in the Short-Term Debt rate recommendations from the Company
14 and Staff is due to projected Short-Term Overnight Financing Rate (SOFR) in
15 2025. The Company projects a short-term index rate of 5.31% and adds a 20 basis
16 point historical spread plus 25 basis points in credit fees for a total cost rate of
17 5.76%.²

18 Similar to the adjustment Staff made to Long-Term Debt rate, Staff simply
19 updates the base rate of the Company's model. Staff uses a projected SOFR of
20 4.51% from IHS Markit for 2025. Applying the Company's 20 basis point spread,
21 and credit fees resulted in a total cost rate of 4.96%. Staff's figures are simply an

¹ Direct Testimony TJL-13

² Exhibit A-14 Schedule D3

1 update to the Company's figures using more recent projections. The details can be
2 found on Exhibit S-4 Schedule D-3.

3 **Return on Equity**

4 Q. Please summarize Staff's Return on Equity (ROE) recommendation.

5 A. Staff recommends a return on equity of 9.90%, which is above the midpoint of
6 Staff's 9.30% - 10.30% reasonable ROE range. To determine the fair return on
7 equity, since DTE Electric is not a publicly traded company, a group of eighteen
8 publicly traded electric utility companies forms a comparable proxy group for
9 Staff's analysis. The proxy group's data is used in both Discounted Cash Flow
10 (DCF) and Capital Asset Pricing Model (CAPM) analyses to determine a
11 reasonable cost of equity. Additionally, a Risk Premium model and a review of
12 electric ROE authorizations from other state jurisdictions from 2023-2024 are also
13 utilized in this case. Staff's 9.90% recommendation considers the Company's
14 currently authorized 9.90% and requested 10.50% ROE in the instant case.

15 Q. In establishing a legal basis for Staff's return on equity analysis in this rate case,
16 what considerations does Staff take into account?

17 A. Traditionally, when considering a return on equity recommendation for a utility
18 company, Staff takes into consideration the landmark Supreme Court decisions in
19 the *Hope* and *Bluefield* cases. Those decisions described various methods such as
20 the "Attraction of Capital" and the "Returns Commensurate with Those on
21 Investments in Enterprises of Comparable Risks" that the Supreme Court found to
22 be lawful and prudent. In *Bluefield Water Works and Improvement Co. vs. Public*
23 *Service Commission*, 262 U.S. 679, 692-693 (1923), the Court stated:

1 “A public utility is entitled to such rates as will permit it to earn a return on the
2 value of the property which it employs for the convenience of the public equal to
3 that generally being made at the same time and in the same part of the country on
4 investments in other business undertakings which are attended by corresponding
5 risks and uncertainties; but has no constitutional right to profits such as are
6 realized or anticipated in highly profitable enterprises or speculative ventures.”

7 Furthermore, in *Federal Power Commission vs. Hope Natural Gas Company*, 320
8 U.S. 591, 603 (1944), the Court stated:

9 “From the investor or company point of view, it is important that there be enough
10 revenue not only for operating expenses but also for the capital costs of the
11 business. These include service on the debt and dividends on the stock. By that
12 standard the return to the equity owner should be commensurate with returns on
13 investment in other enterprises having corresponding risks. That return, moreover,
14 should be sufficient to assure confidence in the financial integrity of the
15 enterprise, so as to maintain its credit and to attract capital.”

16 The Supreme Court’s “end result” doctrine surmises that how a capital structure
17 and rate of return was determined was not so important as long as the end result
18 was appropriate and reasonable for the case at hand. No one methodology
19 provides an exact measure of a fair rate of return on equity, but some methods
20 provide good estimates. The Discounted Cash Flow method and the Capital Asset
21 Pricing Model are the primary models most utility financial analysts use in rate
22 cases to determine a fair and reasonable cost of equity for regulated utility
23 companies. Staff employs those same methods in this rate case along with a risk
24 premium method and a comparison of recent electric ROE determinations from
25 other state jurisdictions.
26

1 Q. Please explain the development of the electric utility proxy group Staff used to aid
2 in determining its cost of equity recommendation for DTE Electric.

3 A. Staff's proxy group consists of thirteen electric companies that meet six criteria.
4 These criteria are that the company must: 1) be listed as an Electric Utility by
5 Value Line, 2) have data available from all Staff sources to complete the DCF and
6 CAPM analyses, 3) be currently paying dividends to shareholders, 4) not be the
7 target of a merger or acquisition, 5) must have a credit rating of Baa1/BBB+ or
8 higher, and 6) must have a net plant of \$10 billion to \$80 billion.

9 Q. How does Staff's proxy group compare to the Company's proxy group?

10 A. Staff's proxy group is smaller than the Company's proxy group. The Company's
11 proxy group includes a total of 25 utilities. There are 13 overlapping companies
12 between the two proxy groups. The Company and Staff had similar criteria to
13 determine its proxy group, with Staff's generally being more restrictive. Staff's
14 more restrictive criteria are an attempt to find a proxy group as similar to DTE
15 Electric as possible.

16 The Company chose to include Exelon Corporation on its proxy group despite its
17 lack of a Beta value in Dr. Villadsen's analysis.³ This contradicts with the given
18 criteria on page 28 of Dr. Villadsen's testimony which includes "Must have
19 sufficient data for estimation." Since Exelon has no beta, it cannot be used in the
20 CAPM analysis and only affects the DCF where it has the highest growth rate of
21 any company in the Company's analysis. Intentionally or otherwise, the impact of

³ Exhibit A-14 Schedule D5.10 & D5.11

1 Exelon Corporation's inclusion in the Company's proxy group results only in a
2 higher DCF output in Dr. Villadsen's analysis.

3 **Discounted Cash Flow (DCF) Analysis**

4 Q. Please provide a brief explanation of the DCF and how it is used in Staff's ROE
5 analysis.

6 A. The DCF method has been a widely used approach for estimating equity
7 investors' return demand since the 1960s. It was introduced after the 1929 stock
8 market crash by economist I. Fisher in 1930 and expanded upon by J.B. Williams
9 in 1938 before being elaborated on by M.J. Gordon and E. Shapiro. The approach
10 derives its basis by surmising how investors evaluate stocks for potential
11 investment. The formula assesses that investors value securities by evaluating the
12 present value of expected future cash flows attributed to those securities. The
13 model suggests that expected future cash flows include dividends, the projected
14 market value of the security at liquidation, and the discount or capitalization rate
15 investors apply to the future cash flows. The model evaluates the current price of
16 a stock with the assumption that the growth of the stock will be constant
17 throughout its life and that its growth will be less than the cost of its equity. The
18 formula is:

19
$$P = D / K - g \text{ where:}$$

20 $P =$ Price per share

21 $D =$ Dividend per Share Expected

22 $K =$ Cost of Equity

23 $g =$ Expected Growth Rate

Rearranging the above formula into the basic DCF formula is the mathematical equation that states that the cost of equity is equal to the security's dividend yield plus a projected future growth rate of the stock. The basic DCF formula is:

$$K = D / P + g$$

$$(D/P = \text{Dividend Yield})$$

Q. Please explain the computation of Staff's DCF estimate.

A. Staff's DCF analysis can be seen in detail on Exhibit S-4 Schedule D-5, pages 3-4. Staff uses the annual dividend yields for the proxy group from Value Line. The dividend yield is modified by the semi-annual compounding method based on the formula $DCF = (D1 / P) * [1 + 0.5g] + g$. The semi-annual compounding model is the preferred model to use when performing a DCF analysis on a group of comparison companies.⁴ This is also the preferred method used by the Federal Energy Regulatory Commission (FERC).

For growth rates, Staff employs three well-known and widely used sources; Yahoo Finance, Zacks, and Value Line. The average of these sources is used to determine each individual proxy company's growth estimate. All available growth rate data is utilized ranging from -12.34% to 19.50%.

Q. What DCF cost of equity did Staff arrive at?

A. Staff arrived at an average adjusted DCF cost of equity estimate of 9.78%, and a median adjusted DCF cost of equity estimate of 9.71%. However, it is worth noting that many analysts would choose to remove the growth rate of -12.34% for

⁴ Parcell, D.C. (1997) The Cost of Capital – A Practitioner's Guide, 1997 Edition, Chapter 8, pages 10-13.

1 OGE Energy and the 10.55% and 19.50% growth rates for Dominion Energy; if
2 this is done, it results in a DCF average of 9.67%.

3 Q. Did DTE also provide a DCF cost of equity estimate?

4 A. Yes. The Company's cost of capital witness, Dr. Villadsen, sponsored both a
5 simple (single step) and multi-step DCF analyses. The single step analysis yields
6 an 11.2% estimate while the multi-step yields 9.4%. These results are outlined on
7 page 38 of Dr. Villadsen's initial testimony.

8 Q. Do you agree with the Company's DCF analysis and the ROE estimate that
9 results from it?

10 A. No. The methodology used by Dr. Villadsen includes a version of the After-Tax
11 Weighted Average Cost of Capital (ATWACC) approach which has never been
12 approved by this Commission. I do understand the value in using the ATWACC
13 as a tool; however, I have two concerns with this methodology. First, the
14 ATWACC approach takes market weights for equity and debt to establish a
15 market value overall rate of return for the proxy group. The approach then
16 attempts to recreate the same overall market value rate of return using book
17 weights or rate case weights of debt & equity of the Company. If the market
18 weight for equity is higher than debt, which is normally the case, then to obtain
19 the same overall market return, it will most always require a higher cost of equity.
20 Second, the ATWACC is a tool that is geared primarily for use in analyzing the
21 Overall Cost of Capital. It does not analyze the Cost of Equity exclusively as a
22 pure DCF or CAPM equation is designed to do, and for these reasons, although I

1 see value in the ATWACC analysis, I do not believe it should be used for setting
 2 an authorized ROE in this rate case.

3 **Capital Asset Pricing Model (CAPM) Analysis**

4 Q. Please discuss Staff's CAPM method.

5 A. The CAPM model was derived from the study and analysis of economists Sharpe,
 6 Lintner, and Treynor and in its simplified form is expressed by the following
 7 equation:

8
$$E(R) = R_f + \beta[E(R_m) - R_f] \text{ where:}$$

9 $E(R)$ = Expected rate of return on a risky security

10 R_f = Risk free rate of return

11 $E(R_m)$ = Expected market rate of return

12 β = The systematic risk or beta of a security

13 In theory, the CAPM model differentiates between two types of risk: diversifiable
 14 and non-diversifiable risk. The theory suggests that an investor's required return
 15 is based on the investor's exposure to risk that is systemic in the market, i.e. non-
 16 diversifiable risk. Risk that is unique to a particular security is called firm specific
 17 risk. One of CAPM's primary assumptions is that investors are fully invested in
 18 the market, i.e. invested in a portfolio of stocks, and thus eliminate (or
 19 substantially reduce) firm specific risk. Hence, the model infers that investors risk
 20 exposure is primarily composed of market risk and since this is risk that cannot be
 21 diversified away, it should be the basis for investor compensation. The beta
 22 coefficient measures the volatility of a security's stock price as it relates to
 23 changes or movements in the market.

1 Q. What equity risk premium estimate is used in Staff's CAPM method?

2 A. In evaluating the historical risk premium, Staff reviewed several sources
3 including Damodaran Online from NYU, the Kroll study entitled *Stocks, Bonds,*
4 *Bills and Inflation: The 2023 Classic Yearbook*, and the Federal Reserve Database
5 (FRED). These data sets provide historical values for market return indices used
6 in the estimation of risk premiums and common equity costs. Staff reviewed
7 return data from 1928-2023. Using the S&P 500 return from Damodaran Online
8 for a return on stocks and a mixture of data from Kroll and FRED for long-term
9 government bond yields. The data results in an average historical risk premium of
10 6.80% from 1928-2023.

11 Q. Why does Staff use these sources in this case?

12 A. In previous cases, the Kroll study cited above provided all the necessary data for
13 approximating a historical risk premium; however, this publication has now been
14 discontinued. The Damodaran Online data is the closest consistent approximation
15 Staff has access to for equity returns with a large data set (reaching back to 1928)
16 but provides no 30-year or long-term bond data. FRED data was the most reliable
17 and consistent data available to Staff for long-term (30-year) bond rates but does
18 not date back more than a few years so Staff used the data from Kroll up to 2022
19 and used FRED for 2023 and onward.

20 Q. What risk-free rate is utilized by Staff for its CAPM analysis?

21 A. Because the U.S. government can print money and levy taxes, government
22 securities are commonly considered to be risk-free. The risk-free rate used in the
23 CAPM analysis is the yield associated with a long-term 30-year U.S. government

1 Treasury bond. Staff reviewed projections of 2025 Treasury bond yields from IHS
2 Markit over a three-month period; the average projection was 3.85%.

3 Q. What measure of beta does Staff use in its CAPM analysis?

4 A. Staff uses beta values from Value Line. Value Line's beta measurement is widely
5 accepted in the industry and utilized by every Cost of Capital witness I am aware
6 of. In general terms, the total market has a beta of 1.00, stocks with a beta of less
7 than 1.00 are less volatile and have less inherent risk than the market as a whole,
8 and stocks with a beta of greater than 1.00 are more volatile and have more
9 inherent risk than the overall market. The Value Line beta is an adjusted forward-
10 looking beta. Value Line's beta methodology measures a 60-month average raw
11 beta on a weekly basis and then applies a Blume adjustment to that raw beta to
12 account for convergence towards the market over time; this results in an adjusted
13 beta (or Blume adjusted beta) which is used by Staff.

14 Q. What cost of equity estimate does Staff arrive at when utilizing the CAPM
15 analysis?

16 A. Utilizing a risk-free rate of 3.85%, a historical risk premium of 6.80%, and an
17 average beta of 0.94, Staff computes an average CAPM cost of equity of 10.23%,
18 and a median of 10.31%. Staff's analysis can be found on page 5 of Exhibit S-4
19 Schedule D5.

20 Q. Did the results of the CAPM analysis provide any concerns to Staff?

21 A. Yes. The primary driver of the CAPM analysis is the beta value. In the utility
22 sector beta values are abnormally high compared to historic trends, so the CAPM
23 ought to be considered a high-end estimate.

1 As stated earlier, Value Line betas take into account 60-months (or five years) of
2 historic data; at this time that includes the sharp decline and rapid recovery of the
3 stock market in spring of 2020 due to the uncertainty created by the Covid-19
4 pandemic.

5 Q. Did the Company provide a CAPM cost of equity estimate?

6 A. Yes, DTE provides a CAPM analysis referenced in Dr. Villadsen's testimony.⁵
7 The Company gives eight CAPM estimates ranging from 10.8% to 11.7%. These
8 models include different market risk premiums, some Empirical CAPM
9 (ECAPM) alpha adjustments, and Hamada adjustments.

10 Q. Does Staff agree with the Company's methodology for the CAPM models?

11 A. No, Staff does not agree with the use of the Hamada Adjustment. As stated in
12 previous cases, Staff does not believe it is appropriate to make an adjustment for
13 equity ratio of the proxy companies in a ratemaking environment.
14 Staff also disagrees with the use of the ECAPM in conjunction with adjusted
15 betas for the purposes of determining a reasonable ROE. However, due to the
16 currently higher than normal utility betas of the proxy companies in this case, the
17 ECAPM does not make a material difference in the outputs of Dr. Villadsen's
18 models. Therefore, I will not discuss Staff's ECAPM objections at length.

19

⁵ Villadsen Initial Testimony pages 32-36

Q. Why does Staff disagree with the use of the Hamada Adjustment for ratemaking purposes?

A. The Hamada Adjustment is meant to correct for differences in financial risk (debt/equity ratio) between the proxy group and the subject company. Much like Staff's previous disapproval of the use of the ATWACC adjustment, Staff rejects the Hamada because there is a fundamental difference between the debt to equity ratio of a publicly traded parent company (like those found in the proxy group) whose equity balance is calculated based on its market value, and a privately owned utility (like DTE Electric) whose equity balance is determined based on its book value. Market values are volatile, changing with each bypass of the stock ticker; meanwhile, book values have a relatively fixed nature, only largely changing when an injection or withdrawal of equity occurs.

When removing the Dr. Villadsen's Hamada adjustment from the equation her average CAPM estimates for the electric proxy are as follows:

Chart 3: CAPM Without Hamada⁶

	Scenario 1	Scenario 2
CAPM	10.98%	10.26%
ECAPM	11.09%	10.34%

Without the Hamada adjustment, the alpha adjustment of the ECAPM makes a larger difference and Staff would not recommend relying on this model. These

⁶ Schedule D5.10 Columns 4-5

outputs are still generally higher than Staff's CAPM due to the use of a higher projected risk-free rate.

Risk Premium Analysis

Q. Please outline Staff's risk premium analysis.

A. Staff provides two risk premium estimates. One that uses the difference between utility equity and utility bond returns, and one that examines the difference between utility equity and Treasury bond returns. Essentially this analysis looks at the historical risk premium investors have received for choosing to invest in the equity of a utility company as opposed to a utility bond or Treasury bond.

Q. Please explain the derivation of the risk premium approach.

A. Staff reviews the Electric Utility Realized Market Return Average from 1931 through 2023, compares it with the A-Rated Public Utility Bond Yield Average, or Treasury bond yield, over the same period. Mergent Public Utility Manual & Bond Record provided complete market return and bond yield data until 2002. Therefore, to obtain utility market data for 2003 to 2023, Staff uses data from the Dow Jones Utilities index as shown on Exhibit S-4, Schedule D-5, pages 7-8. The average electric utility market return over the period was 10.77%, the average return of an A-rated composite utility bond was 6.28%, and the average Treasury yield was 5.99% over the same period. Subtracting these bond yields from the electric utility market returns gives risk premiums of 4.49% and 4.78% respectively. Taking these risk premiums and adding them to current yields of 5.56% for an A-rated utility and 3.85% for a Treasury bond gives an estimate of

1 10.05% using the A-rated utility bond method and 8.63% using the Treasury bond
2 method.

3 Q. Did the Company also provide a Risk Premium analysis?

4 A. Yes. The Company provided a Risk Premium estimate of 10.5% using a treasury
5 bond based regression analysis.

6 Q. Does Staff agree with the Company's Risk Premium analyses?

7 A. No. The Company uses a regression analysis risk premium model, while Staff
8 prefers the use of a more traditional risk premium model that is more widely
9 accepted in the ratemaking process. Because the model employs approved ROE
10 instead of earned ROE (like Staff's model), the data set only reaches back to 1990
11 giving only 34 years of data. For these reasons, Staff maintains its preference for
12 its own Risk Premium models that have a larger data set, and basis in earned
13 ROE.

14 **ROE Recommendation Summary**

15 Q. Does Staff review any other data in its ROE analysis?

16 A. Yes. Staff also reviews authorized rate of return decisions for electric utilities
17 rendered by other state commissions across the country for 2023 and 2024. The
18 average authorized ROE decisions for 2023 was 9.60%, and the average in 2024
19 has been 9.66%.⁷

20
⁷ S&P Global: RRA Regulatory Focus Major Rate Case Decisions (Exhibit S-4 Schedule D-5 Page 10)

Q. Based on Staff's analysis, what is Staff's recommendation of the cost of common equity for DTE Electric in this rate case?

A. Chart 4 summarizes Staff's cost of equity estimates and Staff's recommendation for ROE range and ROE:

Chart 4: Staff's ROE Analysis Summary

<u>Cost of Equity Model</u>	<u>ROE</u>
Discounted Cash Flows	9.71% - 9.78%
CAPM	10.23% - 10.31%
Risk Premium A-Rated Bond	10.05%
Risk Premium Treasury Bonds	8.63%
Average Electric ROE Authorized 2023	9.60%
Average Electric ROE Authorized 2024	9.66%
Recommend Cost of Equity Range	9.30% - 10.30%
ROE used in Overall Cost of Capital	9.90%

Based on the results of the multiple analyses done, along with other factors such as credit metrics, Company requested 10.50% ROE, and currently approved 9.90% ROE, it is Staff's judgement that a reasonable range for DTE Electric's cost of equity to fall within is 9.30% - 10.30%. Within that range, Staff recommends a value of 9.90%, which is the midpoint of Staff's range, is a reasonable ROE for DTE Electric and is appropriate for this rate case.

1 Q. Please summarize the adjustments Staff made which were presented in your
2 testimony.

3 A. Staff recommended a long-term debt rate of 4.21%, a short-term debt rate of
4 4.96%, and an ROE of 9.90%.

5 Q. Does this conclude your testimony?

6 A. Yes.

1 JUDGE WALLACE: Please continue.

2 MR. ORRIS: Staff moves to bind in the
3 Direct Testimony of Tayler Becker, consisting of a cover
4 sheet and 13 pages of qualifications, questions, and
5 answers. Mr. Becker also sponsored Exhibit S-20.0.

6 JUDGE WALLACE: Is there any objection to
7 binding in the testimony of Mr. Becker?

8 Hearing none, the testimony is bound in.

9 Is there any objection to the admission
10 of Exhibit S-20.0?

11 Hearing none, that exhibit is admitted.

12 (Testimony bound in.)

13 - - -

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STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * * *

In the matter of the application of)
DTE ELECTRIC COMPANY for)
 authority to increase its rates, amend its)
 rate schedules and rules governing the)
 distribution and supply of electric energy,)
 and for miscellaneous accounting authority.)
 _____)

Case No. U-21534

QUALIFICATIONS AND DIRECT TESTIMONY OF
TAYLER BECKER
MICHIGAN PUBLIC SERVICE COMMISSION

July 26, 2024

QUALIFICATIONS OF TAYLER BECKER
CASE NUMBER U-21534
PART I

1 Q. Please state your full name and business address for the record.

2 A. My name is Tayler Becker, and my business address is the Michigan Public
3 Service Commission's (MPSC or Commission) office at 7109 West Saginaw
4 Highway, Lansing, Michigan 48917.

5 Q. By whom are you employed and in what capacity?

6 A. I am employed by the MPSC as Manager of the Distribution Planning Section in
7 the Energy Resources Division.

8 Q. Would you please outline your educational background?

9 A. I earned a Bachelor of Science degree in Engineering Technology from Lawrence
10 Technological University in 2012. Since joining the Commission in 2012, I have
11 participated in the 2018 Wisconsin Public Utility Institute's Energy Utility
12 Course, the 2019 Institute of Public Utilities (IPU) Power Grid School through
13 Michigan State University (MSU), the 2019 IPU Intermediate Course through
14 MSU, the 2021 IPU Power Grid School II through MSU, the 2021 Michigan
15 Infrastructure Council (MIC) Asset Management (AM) Champion program,
16 multiple single-day IPU sessions, and the 2023 Fit Leader's Program. I
17 completed the required State of Michigan Emergency Operations Center (SEOC)
18 training supported by the Federal Emergency Management Agency (FEMA)
19 necessary to serve at the SEOC in emergency situations. I have also completed
20 10 Pipeline and Hazardous Materials Safety Administration (PHMSA) Inspector
21 Training and Qualification lead courses as a Gas Safety Engineer, which consist
22 of: 1) PHMSA-PL1250 (Safety Evaluation of Gas Pipeline Systems), 2) PHMSA-
23 PL1255 (Gas Pressure Regulation and Overpressure Protection), 3) PHMSA-

QUALIFICATIONS OF TAYLER BECKER
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PART I

1 PL1310 (Plastic and Composite Materials), 4) PHMSA-PL3242 (Welding and
2 Welding Inspection of Pipeline Materials), 5) PHMSA-PL3256 (Pipeline Failure
3 Investigation Techniques), 6) PHMSA-PL3293 (Corrosion Control of Pipeline
4 Systems), 7) PHMSA-PL3257 (Pipeline Safety Regulation Application and
5 Compliance Procedures), 8) PHMSA-PL3291 (Fundamentals of SCADA System
6 Technology and Operation), 9) PHMSA-PL3292 (Safety Evaluation of Inline
7 Inspection (ILI)/Pigging Programs), and 10) PHMSA-PL3355 (Safety Evaluation
8 of Control Room Management Programs).

9 Q. Would you please outline your professional experience?

10 A. In May 2010, I began working at the Michigan Department of Transportation as
11 an Engineering Intern in the Central Soils Laboratory and, later, the Load-Rating
12 Program. As an intern, I performed many job functions including, but not limited
13 to, subsurface investigations, quality control and asset management functions,
14 structural analysis, traffic safety, and bridge inventory maintenance.

15 After graduating from Lawrence Technological University, I was hired
16 as a Public Utilities Engineer in the Smart Grid Section of the MPSC where I
17 oversaw the deployment of Advanced Metering Infrastructure (AMI) in Michigan
18 and performed research functions related to data privacy and cybersecurity
19 concerns with AMI deployment. I served as a member of the Smart Grid
20 Consumer Collaborative while employed in the Smart Grid Section.

21 In August 2013, I accepted a position in the Gas Operations Section as
22 a Gas Safety Engineer performing Operations and Maintenance (O&M)
23 inspections, construction inspections, and incident investigations related to

QUALIFICATIONS OF TAYLER BECKER
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PART I

1 pipeline systems in Michigan. The inspections and investigations were performed
2 to ensure compliance with the Michigan Gas Safety Standards related to system
3 design, cathodic protection, public awareness, damage prevention, odorization,
4 leak survey, and control room management. I also represented PHMSA as their
5 agent representative in Michigan to assist in inspection and failure investigation
6 efforts.

7 In February 2018, I accepted a position as a Public Utilities Engineer
8 in the Electric Operations Section. My primary responsibilities involved
9 overseeing system reliability and power quality in Michigan, serving as an expert
10 witness in electric distribution rate cases, revising and enforcing the Service
11 Quality and Reliability Standards for Electric Distribution Systems and Technical
12 Standards for Electric Service rules, performing investigations, maintaining
13 annual pole inspection submittals, and supporting Integrated Resource Plan (IRP)
14 work.

15 In March 2021, I was promoted to a Public Utilities Engineering
16 Specialist in the Electric Operations Section. My primary responsibilities were to
17 serve as an electric distribution expert witness in rate cases and IRP cases, provide
18 technical assistance on matters involving the National Electrical Safety Code
19 (NESC), and support MI Power Grid initiative functions. Additional
20 responsibilities involved supporting formal and informal complaints, monitoring
21 utility service interruption restoration efforts following severe weather events, and
22 reviewing various investment plan submittals.

QUALIFICATIONS OF TAYLER BECKER
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PART I

1 In September 2022, I was promoted to Manager of the Gas Safety
2 South Section in the Gas Safety & Operations Division. My responsibilities
3 included directing, coordinating, and supervising programs, activities, and staff
4 assigned to the section. The programs were related to pipeline safety and the
5 Michigan Gas Safety Standards.

6 In January 2024, I accepted my current position as Manager of the
7 Distribution Planning Section in the Energy Resources Division where my
8 responsibilities include directing, coordinating, and supervising programs,
9 activities, and staff assigned to the section. Review and evaluation of electric
10 distribution plans is a primary function of the section.

11 Q. Have you provided a leadership role in Commission activities prior to assuming
12 your current position?

13 A. Yes. In February 2019, I was selected as a workgroup chair to lead the
14 Commission's response on the electric portion of the Statewide Energy
15 Assessment (SEA) in Case No. U-20464. As a follow up to the recommendations
16 provided in the SEA, I was selected as the project co-lead for updating the
17 Technical Standards for Electric Service in Case No. U-20630 under the Grid
18 Security and Reliability Standards workgroup which is one of the many
19 stakeholder initiatives under MI Power Grid launched in the fall of 2019. I also
20 served as a volunteer candidate through the National Association of Regulatory
21 Utility Commissioners (NARUC) to assist in the development of power quality
22 regulations in Sri Lanka.

23 Q. Have you previously presented testimony before the Commission?

QUALIFICATIONS OF TAYLER BECKER
CASE NUMBER U-21534
PART I

1 A. Yes. I have presented testimony in the following cases:

2	<u>Case No.</u>	<u>Case Description</u>
3	U-20134	Consumers Energy Electric Rate Case
4	U-20165	Consumers Energy IRP Case
5	U-20471	DTE Energy IRP Case
6	U-20591	I&M IRP Case
7	U-20697	Consumers Energy Electric Rate Case
8	U-20963	Consumers Energy Electric Rate Case
9	U-21090	Consumers Energy IRP Case
10	U-20836	DTE Electric Rate Case
11	U-21189	I&M IRP Case
12	U-21224	Consumers Energy Electric Rate Case
13	U-21297	DTE Electric Rate Case
14	U-21389	Consumers Energy Electric Rate Case

15 Q. Have you provided technical expertise to support Staff's position in any other
 16 cases before the Commission prior to this proceeding?

17 A. Yes. Some of the larger cases are identified below.

18	<u>Case No.</u>	<u>Case Description</u>
19	U-17102	Data Privacy
20	U-20169	DTE Electric Storm Response Investigation
21	U-20332	Fred Chapman Complaint
22	U-20633	Integration of Resource/Distribution/Transmission Planning
23	U-20828	Consumers Energy COVID-19 Temporary Waiver

QUALIFICATIONS OF TAYLER BECKER
CASE NUMBER U-21534
PART I

1		U-21154	I&M Meter Testing Waiver

DIRECT TESTIMONY OF TAYLER BECKER
CASE NUMBER U-21534
PART II

1 Q. What is the purpose of your testimony?

2 A. The purpose of my testimony is to present the MPSC Staff's (Staff) position and
3 recommendations regarding DTE Electric Company's (Company or DTE)
4 alternatives considered to the overhead-to-underground conversion in the present
5 case and deviations in proposed spend between the 2023 Distribution Grid Plan
6 (DGP), filed September 29, 2023 in MPSC Case No. U-20147, and the present
7 case.

8 Q. Are you sponsoring any exhibits in this proceeding?

9 A. Yes. I am sponsoring the following exhibit:

10 S-20.0 (TJB-1) Company Discovery Response

11 **Alternatives Considered Through Benefit-Cost Analysis**

12 Q. Please provide an overview of the alternatives to overhead-to-underground
13 conversion in the present case.

14 A. Beginning on page 65 of Company witness Satvir Deol's testimony, the Company
15 describes the benefit-cost analysis (BCA) for the Appoline pilot project and
16 explains that the Appoline pilot project was compared with two alternatives –
17 Pole Top Maintenance and Modernization (PTMM) and overhead rebuild. The
18 BCA for the Appoline and Buffalo-Charles overhead-to-underground pilot
19 projects is provided in Company Exhibit A-23, Schedule M13, and provides
20 calculated benefit-to-cost ratios (BCR) for each investment option and compares
21 the options to alternatives.

22 Q. Does Staff have concerns with the alternatives considered?

DIRECT TESTIMONY OF TAYLER BECKER
CASE NUMBER U-21534
PART II

1 A. Yes. Although Staff appreciates the efforts to develop and share a BCA
2 approach, Staff opines that the PTMM alternative considered is incomplete and
3 not considered a true alternative following Staff's review. The Commission has
4 ordered¹ BCAs be informed by the provisions of the National Standard Practice
5 Manual (NSPM). The NSPM² glossary defines a BCA as "a systematic approach
6 for comparing the benefits and costs of alternative options to determine whether
7 the benefits exceed the costs over the lifetime of the program or project under
8 consideration." The PTMM and overhead rebuild alternative options compared to
9 the overhead-to-underground conversion should be true, finished alternatives that
10 evaluate total costs in the BCA. The PTMM program is similar to an operations
11 and maintenance activity involving inspection and testing of equipment and,
12 where necessary, replacement of failed equipment on the overhead distribution
13 system that does not involve converting 4.8 kV circuits to 13.2 kV. In contrast,
14 the Appoline and Buffalo-Charles overhead-to-underground projects involve the
15 installation of new cable with 13.2 kV conversion capability.^{3,4} To illustrate
16 further, assuming PTMM is selected as the preferred alternative to overhead-to-
17 underground conversion, if the inspections under the PTMM result in pole and
18 pole-top replacements, the work will not completely make the circuits 13.2 kV
19 capable. The remaining work necessary to convert the circuit to 13.2 kV leaves

¹ Refer to 7/27/22 Commission Order in Case No. U-20898, p. 9.

² See National Standard Practice Manual for Benefit Cost Analysis of Distributed Energy Resources, August 2020, p. xviii, available at [NSPM-DErs_08-24-2020.pdf \(nationalenergyscreeningproject.org\)](https://www.nationalenergyscreeningproject.org/NSPM-DErs_08-24-2020.pdf) (accessed July 12, 2024).

³ Refer to Company witness Deol's testimony, p. 70.

⁴ Refer to Company Exhibit No. A-23, Schedule M11, p. 3.

DIRECT TESTIMONY OF TAYLER BECKER
CASE NUMBER U-21534
PART II

1 PTMM an “unfinished” alternative compared to the overhead-to-underground
2 conversion with no consideration or methodology in the BCA to account for the
3 additional work needed to make PTMM “finished” and prove an “apples-to-
4 apples” comparison. In addition to the PTMM work, further work will be needed
5 to convert to 13.2 kV which, to Staff’s understanding, is not being considered in
6 the analysis. It is Staff’s understanding that DTE’s future goal is to convert all
7 circuits to 13.2 kV, making comparisons to true, finished alternatives an important
8 aspect of BCA to ensure alternative investment options are complete with all
9 benefits and costs considered. One option could be to include the projected costs
10 associated with converting from 4.8 kV to 13.2 kV in the future with the PTMM
11 option. It is not clear how the Company has applied a comparable PTMM
12 alternative to the overhead-to-underground conversions to achieve the status of
13 weighing an option against a true alternative.

14 Q. What is Staff’s recommendation to the Company regarding alternatives
15 considered?

16 A. Staff recommends the Company improve its BCA alternative analysis in future
17 distribution plans and contested cases by applying comparable alternatives to
18 prove true and complete alternatives have been considered.

19 **Difference in Proposed Spending Between DGP and Present Case**

20 Q. When was the Company’s most recent DGP filed?

DIRECT TESTIMONY OF TAYLER BECKER
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1 A. The Company filed its 2023 DGP on September 29, 2023 in MPSC Case No. U-
 2 20147.⁵ The Company filed its present rate case on March 28, 2024, six-months
 3 after the DGP filing.

4 Q. How does the projected spending in the 2023 DGP compare to the projected
 5 spending in the present case?

6 A. Company witness Allen Kryscynski describes the role and approach of the 2023
 7 DGP as it relates to the present case and states the investments in the case are
 8 consistent with the long-term vision laid out in the DGP.⁶ Staff issued discovery
 9 to the Company aimed to compare the 2023 DGP proposed spending with the
 10 proposed spending in the present case.⁷ The Company's discovery response to
 11 STDE-14.16 demonstrates that, with the exception of the Technology &
 12 Automation spend category, several unplanned and planned⁸ spend categories
 13 show a cumulative increase of over \$335 million more in 2025 projected spending
 14 under the present case when compared to the 2023 DGP. The variances provided
 15 are as follows:

16 Emergent Replacements: 27% (+\$107 million)

17 Customer Connections, Relocations & Other: 2% (+\$5 million)

18 Tree Trimming: 71% (+\$100 million)

19 Preventive Maintenance: 24% (+\$2 million)

20 Infrastructure Resilience & Hardening: 22% (+\$71 million)

⁵ U-20147-0095, [Filing: U-20147-0095 \(site.com\)](https://www.site.com).

⁶ Refer to Company witness Kryscynski's testimony, pp. 30-32.

⁷ Refer to Staff Exhibit No. S-20.0 (TJB-1), pp. 1-2.

⁸ Refer to Company witness Kryscynski's testimony, p. 38.

DIRECT TESTIMONY OF TAYLER BECKER
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1 Infrastructure Redesign & Modernization: 13% (+\$53 million)

2 Technology & Automation: 0% (-\$1 million)

3 Q. What are the Company's reasons for the increases in projected spending in the
4 present case?

5 A. Based on the Company's discovery response, the increase in the Emergent
6 Replacements unplanned category is largely attributed to incorporating more
7 recent years into the five-year average and increased inflation rates. The Tree
8 Trimming spend amount of \$140 million in the DGP was an error, while the
9 difference in spend under Preventative Maintenance was a result of an inflation
10 adjustment. Finally, the Company is requesting recovery of over \$120 million
11 more in the present case under the Infrastructure Resilience & Hardening and
12 Infrastructure Redesign and Modernization planned categories. The largest
13 increases under the planned categories are attributed to three primary reasons –
14 increase in Customers Experiencing Multiple Interruptions (CEMI) investments
15 (after the Company forecasted a ramp down), increase in 4.8 kV Hardening, and
16 an increase in City of Detroit Infrastructure (CODI) to expand isolation down
17 (ISO down) areas being worked on.

18 Q. What is Staff's recommendation to the Company regarding DGP and rate case
19 alignment?

20 A. Staff recognizes that spending plans may change from the time a DGP and rate
21 case are filed; however, the amount of additional spend in the present case
22 compared to the DGP filed six-months prior is alarming. The spend amounts
23 provided in the DGP are large, and to see actual amounts requested in a rate case

DIRECT TESTIMONY OF TAYLER BECKER
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1 even higher than what was in the DGP is disappointing. One of the primary
2 purposes of any electric distribution plan is to provide transparency into projected
3 distribution system investments, which includes best efforts in sharing accurate
4 spend projections. The increase in spending in the present case beyond what was
5 included in the 2023 DGP calls into question the Company's ability to provide
6 transparent and accurate investment plans to customers and interested parties.
7 Staff recommends the Company improve upon aligning spending plans between
8 the two filings and communicate decisions to increase or decrease spending in
9 categories after a DGP is filed. Staff proposed a distribution plan annual update
10 approach⁹ in its comments to the Company's 2023 DGP that could serve as a
11 platform to communicate changes in projected spend.

12 Q. Please summarize your recommendations.

13 A. Staff's recommendations are as follows:

- 14 1. Staff recommends the Commission order the Company improve its BCA
15 alternative analysis in future distribution plans and contested cases by applying
16 comparable alternatives to prove true and complete alternatives have been
17 considered.
- 18 2. Staff recommends the Commission order the Company improve upon aligning
19 spending plans between DGP and rate case filings and instruct the Company to
20 communicate its decisions to increase or decrease spending in categories after a
21 DGP is filed.

⁹ Refer to Staff's 3/15/24 Comments in MPSC Case No. U-20147, pp. 18-19.

DIRECT TESTIMONY OF TAYLER BECKER
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1 | Q. Does this conclude your testimony?

2 | A. Yes.

1 MR. ORRIS: Staff moves to bind in the
2 Direct Testimony of John DeCooman, consisting of a cover
3 sheet and 24 pages of qualifications, questions, and
4 answers. Mr. DeCooman also sponsored the following
5 exhibits: S-10, S-10.1, S-10.2, S-10.3, S-10.4, S-10.5,
6 S-10.6, S-10.7, and S-10.8.

7 JUDGE WALLACE: O.K. Is there any
8 objection to binding in the direct testimony of Mr.
9 DeCooman?

10 Hearing none, the testimony is bound in.
11 Is there any objection to the admission
12 of Exhibits S-10 -- is it S-10.0 or just S-10.

13 MR. ORRIS: Just S-10.

14 JUDGE WALLACE: S-10, S-10.1, S-10.2,
15 S-10.3 through S-10.8?

16 Hearing none, those exhibits are
17 admitted.

18 (Testimony bound in.)

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STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * * *

In the matter of the application of)
DTE ELECTRIC COMPANY for)
 authority to increase its rates, amend its)
 rate schedules and rules governing the)
 distribution and supply of electric energy,)
 and for miscellaneous accounting authority.)
 _____)

Case No. U-21534

QUALIFICATIONS AND DIRECT TESTIMONY OF

JONATHAN J. DECOOMAN

MICHIGAN PUBLIC SERVICE COMMISSION

July 26, 2024

QUALIFICATIONS OF JONATHAN J. DECOOMAN
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PART I

1 Q. Please state your full name and business address for the record.

2 A. My name is Jonathan J. DeCooman. My business address is the Michigan Public Service
3 Commission's work site at 7109 West Saginaw Highway, Lansing, Michigan 48917.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission (MPSC or Commission) in
6 the Energy Resources Division. I am a Public Utilities Engineering Specialist in the
7 Resource Optimization and Certification (ROC) Section, which is responsible for
8 assisting in the implementation of Public Act 341 of 2016 and evaluating applications for
9 transmission siting pursuant to Public Act 30 of 1995.

10 Q. Would you please provide an outline of your educational background?

11 A. I earned a Bachelor of Science in Mechanical Engineering from Saginaw Valley State
12 University (SVSU) in 2016. I successfully completed the Fundamentals of Engineering
13 Mechanical examination in August 2017. Since joining the Commission, I have attended
14 several training seminars, including: a Long-Term Load Forecasting in MS Excel seminar
15 held by Electric Utility Consultants, Inc. (EUCI) in August 2018; training seminars held
16 by the Mid-Continent Independent System Operator (MISO) relating to modeling using
17 the Electric Generation Expansion Analysis System software in September 2018, January
18 2019, and June 2019; multiple teleconference training sessions conducted by Energy
19 Exemplar on modeling using the Aurora XMP™ software, including participating in its
20 pilot program to become "core certified" in this software in June 2020; a conference on
21 Integrated Resource Planning contemporary topics held by EUCI in March 2019;
22 Introductory and Advanced week-long Annual Regulatory Studies Programs held by the
23 Institute of Public Utilities (IPU) in August 2019; a ratemaking course held by IPU in

QUALIFICATIONS OF JONATHAN J. DECOOMAN
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PART I

October 2019; a multi-day conference on Regional Transmission Organization Fundamentals held by the Wisconsin Public Utility Institute in April 2021; and a conference on energy storage off-take contracts and Power Purchase Agreements (PPAs) held by EUCI in May 2023.

Q. Would you please outline your professional working experience?

A. In September 2015, I began working through a cooperative program between SVSU and Means Industries, Inc. As a Co-op Engineer, I assisted a cross-functional engineering team in developing and implementing process improvements for the manufacture and assembly of automotive clutch parts and clutch assemblies. I was also responsible for performing quality measurements and analysis of the mechanical properties of clutch plates and other components at several points in the manufacturing process.

In June 2018, I accepted a position as a Public Utilities Engineer in the Generation and Certificate of Need, now ROC, Section of the MPSC. At the Commission, I am part of a cross-functional group responsible for evaluating regulated utilities' integrated resource plans (IRPs). I am responsible for evaluating certain environmental and generation capital costs filed in utility rate case applications. I was a member of the MPSC Staff (Staff) work group that supported the Commission's statewide review of the supply, engineering, and deliverability of electricity and contingency planning of the electric system, pursuant to the Commission's Order in Case No. U-20464.¹ I was a member of multiple Staff work groups in the MI Power Grid initiative relating to the following topics: Energy Programs and Technology Pilots,

¹ *In the matter, on the Commission's own motion, to issue a report on the state's supply, engineering, and deliverability of natural gas, electricity, and propane and contingency planning, as requested by the Governor, 2/7/2019 Order, MPSC Case No. U-20464.*

QUALIFICATIONS OF JONATHAN J. DECOOMAN
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Integration of Distribution/Transmission/Resource Planning, and Competitive Procurement.²

In June 2023, I accepted my current position as a Public Utilities Engineering Specialist in the ROC section. In addition to my previous responsibilities, I also act as Staff lead in the review of generating resource addition and retirement proposals outside of IRPs. I also serve as lead of Staff's internal energy storage work group, whose work includes participating in the review of energy storage proposals in utility case filings and researching best practices for the evaluation of energy storage resources in utility planning processes.

Q. Have you previously filed testimony before the Commission?

A. Yes. I have prepared and filed testimony in the following cases before the Commission:

- Case No. U-20165: Consumers Energy's 2018 IRP;
- Case No. U-20162: DTE Electric's 2018 Electric Rate Case;
- Case No. U-18091: DTE Electric's Remanded Avoided Cost Calculation;
- Case No. U-20350: Upper Peninsula Power Company's 2019 IRP;
- Case No. U-20359: Indiana Michigan Power Company's 2019 Electric Rate Case;
- Case No. U-20561: DTE Electric's 2019 Electric Rate Case;
- Case No. U-20591: Indiana Michigan Power Company's 2019 IRP;
- Case No. U-20697: Consumers Energy's 2020 Electric Rate Case;
- Case No. U-20963: Consumers Energy's 2021 Electric Rate Case;
- Case No. U-21090: Consumers Energy's 2021 IRP;

² In the matter, on the Commission's own motion, to establish MI Power Grid, 10/17/2019 Order, MPSC Case No. U-20645.

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- Case No. U-20836: DTE Electric's 2022 Electric Rate Case;
- Case No. U-21189: Indiana Michigan Power Company's 2021 IRP;
- Case No. U-21224: Consumers Energy's 2022 Electric Rate Case;
- Case No. U-21193: DTE Electric's 2022 IRP;
- Case No. U-21297: DTE Electric's 2023 Electric Rate Case;
- Case No. U-21389: Consumers Energy's 2023 Electric Rate Case; and
- Case No. U-21374: Consumers Energy's 2023 VGP Filing.

Q. Have you provided technical analysis in any other cases?

A. Yes, I provided technical analysis in Case No. U-20276, Upper Peninsula Power Company's electric rate case related to its requests for its Escanaba hydroelectric facilities; in Case No. U-20471, DTE Electric's IRP regarding cost and performance assumptions for the modeling of new and existing fossil fueled generation resources; and in Case No. U-20599, Northern States Power Company's IRP regarding modeling inputs and demand, energy market, and fuel price forecasting.

DIRECT TESTIMONY OF JONATHAN J. DECOOMAN
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PART II

1 Q. What is the purpose of your testimony?

2 A. The purpose of my testimony is to provide MPSC Staff's (Staff's) review and
3 recommended adjustments to the Commission for capital expenditures requested by DTE
4 Electric Company (DTE or the Company) in the "Other Power Generation – Non-
5 Routine" category included on page 2 of Exhibit A-12, Schedule B5.1, and select pilot
6 projects included on page 17 of Exhibit A-12, Sch. B5.4. A summary of my
7 recommended adjustments is provided at the end of this testimony.

8 Q. Are you sponsoring any exhibits?

9 A. Yes, I am sponsoring the following exhibits:

10 **Exhibit S-10.0:** Blackstart Project redacted scoping documents;

11 **Exhibit S-10.1:** Comparison of requested, approved, and actual non-routine capital
12 expenditures from Case No. U-21297;

13 **Exhibit S-10.2:** Monthly 2023 capital expenditures for select non-routine projects;

14 **Exhibit S-10.3:** Company discovery responses on Slocum cost increases;

15 **Exhibit S-10.4:** Slocum Pilot scoping document;

16 **Exhibit S-10.5:** Identification of contract work for Trenton Channel Battery;

17 **Exhibit S-10.6:** Breakout of 'Other Costs' category for Trenton Channel Battery;

18 **Exhibit S-10.7:** Company discovery responses on ANM pilot; and

19 **Exhibit S-10.8:** Comparison of DGP and rate case project requests.

20 Q. Were these exhibits prepared by you or under your supervision?

21 A. Yes, these exhibits were prepared by me from data supplied by the Company in response
22 to Staff data requests or information included in the Company's initial filing.

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Blackstart Projects

Q. What requests for recovery of capital expenditures is the Company making for its Blackstart Projects?

A. Lines 37 through 39 on page 2 of Exhibit A-12, Schedule B5.1, include costs associated with projects to support the North American Electric Reliability Corporation's (NERC) Black Start plan.³ Company witness Margaret E. Guillaumin provides limited details on each of the three Blackstart Projects on pages 46 through 48 of her testimony.

Q. What are the total capital expenditures requested for each of these projects in the instant case?

A. Requests for the three Blackstart Projects are included on lines 37 through 39, page 2 of Exhibit A-12, Schedule B5.1, and are summarized below:

Blackstart Project #	Exhibit Reference	Historical Period (\$000)	Bridge Period (\$000)	Test Year (\$000)
10570 & 20255	A-12, B5.1, page 2, line 37	20,743	12,633	-
17611	A-12, B5.1, page 2, line 38	53	8,102	-
18320	A-12, B5.1, page 2, line 39	1,063	4,445	-

³ Testimony of Margaret E. Guillaumin, p. 45.

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1 Q. Has the Company provided details on the scope of and the need for each of these
2 projects?

3 A. The Company provided a general scope of each project and identified the different areas
4 of work projected to take place in each year; however, details were limited due to the
5 nature of the projects containing Critical Energy Infrastructure Information. Project
6 scoping documents were also provided, with all details fully redacted outside of project
7 budgets.⁴

8 Q. Has the Company requested recovery of capital expenditures for the three Blackstart
9 Projects in previous rate case filings before the Commission?

10 A. Yes, the Company has included requests for recovery of capital expenditures for
11 Blackstart Projects in the previous two electric rate cases: Case Nos. U-20836 and U-
12 21297. In Case No. U-20836, the Commission disallowed all projected bridge and test
13 year expenditures, citing information in the case that cast doubt on the Company's
14 forecasted expenditures. In the previous case, Case No. U-21297, the Commission did not
15 adopt a full disallowance of project costs recommended by the Administrative Law Judge
16 and other parties, finding that these projects are necessary to maintain grid security.⁵
17 However, the Commission found merit in Staff's partial disallowances, which aligned
18 project costs with updated projections while accounting for the pattern of over projections
19 for these projects.⁶

20 Q. How have the Company's projections for capital spending for these projects in previous
21 electric rate cases compared to its actual spending?

⁴ Exhibit S-10.0.

⁵ 12/01/23 Commission Order, Case No. U-21297, pp. 42-43.

⁶ *Id.*, at, pp. 43-44.

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1 A. Exhibit S-10.1 is data that was provided by the Company in response to a discovery
2 request. It includes a comparison of requested, approved, and actual capital expenditures
3 for non-routine projects over the time-period considered in the last rate case. As
4 demonstrated in column (s) of lines 47 through 49, there were significant discrepancies
5 between the forecasted and actual bridge period capital expenditures.⁷ These
6 discrepancies are even more pronounced the farther out the projections are, with actual
7 expenditures for the initial 11-months of the bridge period in column (g) being much
8 closer to the Company's projections than comparing actual to requested expenditures for
9 the final 12-months of the bridge period, shown in column (m). In general, even with the
10 significant disallowances made by the Commission, the approved amounts for the
11 Blackstart Projects were closer to actual project spend than the Company's initial
12 requests.⁸

13 Q. Since its initial filing, has the Company provided updated actual or projected capital
14 spending for these projects?

15 A. Yes. In response to a discovery request, the Company provided actual capital
16 expenditures in 2023 for its non-routine projects, included on page 2 of Exhibit A-12,
17 Schedule B5.1. Exhibit S-10.2 provides this information, as well as a comparison of the
18 actual spend in 2023 for each project with the estimated spending provided in the initial
19 filing. As evidenced by column (q), rows 37 through 39, in Exhibit S-10.1 for the
20 Blackstart Projects collectively, the Company overestimated actual spending in 2023 by
21 \$1.366 million, or approximately 8.5%. However, when comparing the projected 2023

⁷ Exhibit S-10.2.

⁸ Exhibit S-10.2, lines 47-49, columns (f) and (l).

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expenditures from Case No. U-21297 included in column (s), which were made approximately a year earlier than those in column (q), each project has a much more significant discrepancy--when combined, representing an overestimation of \$2.5 million, or approximately 14%.

Q. What recommended adjustments does Staff have for the Commission regarding the three Blackstart Projects?

A. Staff is recommending the following partial disallowances to capital expenditure requests for the three Blackstart Projects:

Blackstart Project #	Exhibit Reference	2023 Bridge Period Disallowance	2024 Bridge Period Disallowance
10570 & 20255	A-12, B5.1, page 2, line 37	(\$297,000)	(\$314,020)
17611	A-12, B5.1, page 2, line 38	(\$54,000)	(\$852,460)
18320	A-12, B5.1, page 2, line 39	(\$1,015,000)	(\$62,300)

Q. Why is Staff recommending these specific adjustments for the Blackstart Projects?

A. Staff's recommended adjustment will align bridge period capital expenditures with each projects' actual expenses for 2023 and adjusts 2024 expenses based on the forecasted error in 2-years forward capital expenditure estimates for the Blackstart Projects made in

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Case No. U-21297. Making such an adjustment to the 2024 capital expenditure estimates is appropriate given the consistent overestimation of these project costs, detailed in my testimony as well as in Staff's testimony in the prior rate case.⁹ It is unreasonable to support the requested amounts when the Company has consistently overestimated costs for the Blackstart Projects. Therefore, the Commission should adopt Staff's partial disallowance of \$1,366,000 and \$1,228,780 in 2023 and 2024 bridge period capital expenditures for the three Blackstart Projects.

Slocum Battery Pilot

Q. What requests for recovery is the Company making for its Slocum Battery Pilot?

A. The Company is requesting recovery of the remaining project capital expenditures for construction and achievement of commercial operations for the Slocum Battery Pilot (Slocum). The Company is requesting recovery of \$7.6 million and \$10.1 million in 2022 and 2023 capital expenditures related to initial engineering work, issuance of Request For Proposals (RFP), and securing long-lead equipment.¹⁰ The Company is also requesting recovery of a projected \$26.8 million and \$0.1 million in 2024 and 2025 capital expenditures, respectively, to achieve commercial operations for Slocum in November 2024.¹¹ Total costs for Slocum are now projected to total \$44.7 million.

Q. Has the Company previously requested recovery of capital expenditures for the Slocum Battery Pilot?

A. Yes. The Company has presented the Slocum pilot and requested recovery of expenses for its development in the previous two electric rate cases, Case Nos. U-20836 and U-

⁹ Staff witness DeCooman Testimony in Case No. U-20836.

¹⁰ Testimony of Margaret E. Guillaumin, pp. 48-49.

¹¹ *Id.*

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1 21297. Much of the information presented in this case has been presented in previous
2 cases, with some information refined as the project has developed. In its Order in Case
3 No. U-21297, the Commission rejected the full disallowance of Slocum's costs
4 recommended by some parties and instead adopted Staff's partial disallowance of \$3.5
5 million in projected capital expenditures due to a pattern of discrepancies between actual
6 expenditures and the Company's projections for this pilot.¹²

7 Q. How have the Company's past projections of capital expenditures for Slocum compared
8 to actual expenses?

9 A. As demonstrated on line 40, column (r) of Exhibit S-10.2, the Company's projections for
10 2023 expenditures in this case were very close to actual spending, with less than a 1%
11 difference. The Company's projections for 2023 expenditures in the previous case, Case
12 No. U-21297, were 2% above the actual project spend for 2023.¹³

13 Q. Have there been any significant developments or changes to the Slocum Battery Pilot's
14 timelines or costs?

15 A. Yes. While the Company has maintained its timeline from Case No. U-21297 for Slocum
16 to achieve commercial operations in November 2024, costs have increased significantly
17 since that case. In Case No. U-21297, the Company estimated the total capital
18 expenditures for construction of Slocum at \$34.7 million.¹⁴ The Company provided an
19 updated estimate of total project costs for Slocum at \$44.7 million in this filing.¹⁵

¹² 12/01/23 Order in Case No. U-21297, p. 244.

¹³ Exhibit S-10.2, line 40, column (t).

¹⁴ Testimony of Justin L. Morren in Case No. U-21297, p. 49.

¹⁵ Testimony of Margaret E. Guillaumin, p. 49.

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Q. Did the Company provide an explanation of what caused the approximately \$10 million increase in the estimated cost of Slocum?

A. In response to a data request from Staff, the Company provided a breakout that compared the project cost estimates from the instant case to the estimates from the previous electric rate case, Case No. U-21297. This response, sponsored as Exhibit S-10.3, includes an explanation of the cause of each category's cost increase. This comparison of project costs has been included below:

Table 1. Comparison of Slocum costs between cases.

Description	U-21297	U-21534	Variance	Reason for Variance
Battery Materials	\$15.0	\$20.0	\$5.0	Raw lithium prices increased
Demo & Installation Labor	\$5.4	\$7.4	\$2.0	Labor escalation based on actual competitive bids received
Electrical Infrastructure	\$8.5	\$8.5	\$0.0	
Engineering & Permits	\$1.0	\$1.9	\$0.9	
Overheads (Indirects)	\$4.8	\$6.9	\$2.1	Adjustment based on cost increases for material and labor
Total	\$34.7	\$44.7	\$10.0	

Q. Did Staff request any additional explanation for the cause of these cost increases?

A. Yes. Staff asked additional questions to characterize the cost increases in specific cost categories, which have been included in Exhibit S-10.3. These additional questions established that contracts have been signed for all remaining project work and provided some additional details into the nature of the specific cost increases in some categories.

Q. Does Staff have any recommendations for the Commission regarding the Company's requests for recovery of capital expenditures for Slocum?

A. Staff recommends the Commission disallow \$2,177,871 in bridge period capital expenditures for the Slocum Battery pilot. This adjustment removes the additional

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capital expenditures for project overheads identified in Exhibit S-10.3 and more precisely defined in the project scoping document.¹⁶

Q. Why is Staff recommending a disallowance of this increase in project overheads for Slocum?

A. Staff is recommending this disallowance due to the Company not adequately supporting the nature of this cost increase. The Company initially identified the cause of this increase as being due to increases to the cost of material and labor. When asked to further detail how specific cost increases to materials and labor resulted in this \$2.1 million in additional overheads and why this couldn't be anticipated prior to this point in the project's development, the Company explained that project overheads vary proportionally based on changes to materials and labor and are not fixed.¹⁷ However, Staff does not find this to be an adequate explanation for these cost increases. Not only did the Company not provide any specific walkthrough or explanation as to how increases to project labor or materials directly lead to increases to project overheads, but its explanation that project overheads vary proportionally with these costs is not supported by the actual cost increases in these categories.

Q. What does Staff mean when it says that project overheads for Slocum do not vary proportionally with project materials and labor costs?

A. As demonstrated on page 1 of Exhibit S-10.3, while project materials and labor costs both increased from the estimates provided in Case No. U-21297, project overheads did not increase proportionally. Project materials increased by \$5 million, or 25%, while project

¹⁶ Exhibit S-10.4.

¹⁷ Exhibit S-10.3, p. 5.

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1 labor increased by \$2 million, or 37%. Combined, these two categories saw cost
2 increases between the two cases of \$7 million, or a 34% increase. Meanwhile, the
3 increase of \$2.177 million in project overheads is an increase of almost 45%. Staff finds
4 it unreasonable to approve the requested increase of nearly 50% of the Company's
5 internal project overheads, particularly when the Company's explanation is not supported
6 by the data presented.

7 Trenton Channel Battery

8 Q. What requests for recovery is the Company making for its Trenton Channel Battery
9 project in this case?

10 A. As identified on page 50 of Company witness Guillaumin's testimony, the Company has
11 estimated and is requesting recovery of \$5.3 million in 2023 capital spending to bid and
12 award equipment and procure long-lead materials. The Company is projecting to spend
13 \$120.7 million in 2024 for the delivery of major equipment and to begin site preparation
14 and construction in the fourth quarter of 2024. In 2025, the Company is projecting to
15 spend \$291.9 million to take delivery of batteries and electrical equipment and complete
16 construction of the substation and Battery Energy Storage System (BESS) electrical
17 switchyard.¹⁸ Commercial operations are expected to begin in 2026.¹⁹

18 Q. Has the Company previously requested recovery of capital expenditures for the Trenton
19 Channel Battery project?

20 A. Yes. The need for this battery was first identified in the Company's 2022 IRP, and the
21 July 26, 2023 approved Settlement Agreement in Case No. U-21193 aligned the

¹⁸ Testimony of Margaret E. Guillaumin, p. 50.

¹⁹ *Id.*

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1 Company's storage capacity build plan through 2025 with the development of the
2 Trenton Channel Battery.²⁰ In the Company's previous electric rate case, Case No. U-
3 21297, the Company requested recovery of all projected capital expenditures for this
4 project through November 2024. In its Order in Case No. U-21297, the Commission
5 adopted Staff's proposed disallowance of all project costs for the Trenton Channel
6 Battery, which had not received internal budgetary approval.²¹ This brought the
7 approved total for this project to the \$9 million needed to complete engineering work
8 identified in its approved budget.

9 Q. Has the Company received full internal budgetary approval for the Trenton Channel
10 Battery?

11 A. Yes. As identified on page 50 of the testimony of Company witness Guillaumin, the
12 project received full internal Company approval in October 2023.

13 Q. How have the Company's past projections for project costs for the Trenton Channel
14 Battery compared to actual expenditures?

15 A. Exhibit S-10.2 includes a comparison of actual 2023 capital expenditures for select non-
16 routine projects with the Company's estimates in this case and in the previous electric
17 rate case, Case No. U-21297. As indicated in column (r) of line 41 of Exhibit S-10.2, the
18 Company's projections for its 2023 capital expenditures in this case were very close to
19 the actual project spend, with a difference of less than 1%. However, when comparing
20 this to the projection for 2023 capital expenditures included in the previous case, Case
21 No. U-21297, there was an overestimation of over 400% of actual costs. This is likely

²⁰ Settlement in Case No. U-21193, approved by the Commission on 07/26/23, p. 10.

²¹ 12/01/23 Order in Case No. U-21297, p. 44.

DIRECT TESTIMONY OF JONATHAN J. DECOOMAN
CASE NUMBER U-21534
PART II

1 explained by changes to the project schedule and potential impacts of the Commission's
2 partial disallowance, but even compared to the \$9 million in capital spending approved
3 by the Commission, the Company underspent its approved amounts by \$3.8 million. This
4 underscores the uncertainty of costs associated with large non-routine projects at this
5 stage in development, prior to the issuance of contracts for project work or the start of
6 construction.

7 Q. Has the Company received any additional approvals from the Commission for the
8 Trenton Channel Battery?

9 A. Yes. Contracts with the Engineering, Procurement, and Construction contractor and
10 battery vendor, totaling \$334 million in project spend, were presented to the Commission
11 in Case No. U-21566. The Commission approved these contracts in March 2024.²² The
12 Company estimates that \$89 million in additional project work not included in these
13 contracts is needed to complete the Trenton Channel Battery.²³

14 Q. Did the Company provide any additional information on the scope of work for the
15 remaining \$89 million in estimated project costs?

16 A. Yes, the Company provided a general description and high-level cost estimate for the
17 project work that makes up the remaining \$89 million in estimated costs in its initial
18 filing.²⁴ Exhibit S-10.5 includes the Company's responses to Staff data requests, which
19 provide a more detailed description of certain components, and provided a breakout of

²² 3/15/24 Order in Case No. U-21566, p. 4.

²³ Testimony of Margaret E. Guillaumin, p. 50.

²⁴ *Id.*

DIRECT TESTIMONY OF JONATHAN J. DECOOMAN
CASE NUMBER U-21534
PART II

1 project work, which is included in the Commission approved contracts and the remaining
2 \$89 million of other project work.²⁵

3 Q. Did the Company provide more details into the non-contract project work included in the
4 '[Trenton Channel Energy Center] TCEC other costs' category on page 3 of Exhibit S-
5 10.5?

6 A. Yes, Exhibit S-10.6 is data that the Company provided to Staff, which breaks out the
7 'TCEC other costs' category on page 3 of Exhibit S-10.5 into more details. Exhibit S-
8 10.6 also identifies whether the work in each category will be performed under a contract.
9 Line 11 provides the total for all non-contracted work included in the 'TCEC other costs'
10 category, totaling \$59.36 million.

11 Q. Does Staff have any recommendations for the Commission regarding the Company's
12 requests for recovery of capital expenditures for the Trenton Channel Battery?

13 A. Staff recommends a partial disallowance of \$1,612,000 and \$8,298,000 in bridge period
14 and test year capital expenditures for the Trenton Channel Battery project. Staff's
15 disallowance is a flat percentage adjustment to the non-contracted work identified on line
16 11 of Exhibit S-10.6.

17 Q. What is the basis for Staff's partial disallowance of non-contracted project work for the
18 Trenton Channel Battery?

19 A. Staff is recommending this partial disallowance of the \$59.36 million in non-contracted
20 project work identified in Exhibit S-10.6 to represent the uncertainty in these estimates,
21 which don't have a contract or other information to support these estimates. Staff's

²⁵ Exhibit S-10.5.

DIRECT TESTIMONY OF JONATHAN J. DECOOMAN
CASE NUMBER U-21534
PART II

1 recommended disallowance would adjust the bridge period non-contracted work by 10%
2 of the total estimate, and in the test year by 20%. The increase to this adjustment in the
3 test year accounts for the increasing uncertainty with estimates farther out into the future,
4 where the costs are less defined.

5 Q. Is Staff's recommended adjustment supported by any additional project specific
6 evidence?

7 A. Adjusting projected capital expenditures for certain non-routine projects is a well-
8 established practice to account for uncertainties with a utility's cost estimates. Staff has
9 recommended, and the Commission has approved, adjustments based on the state of a
10 non-routine project's development, or the class of cost estimate used to support a utility's
11 requests, in numerous electric rate cases.²⁶ When comparing the requested, approved,
12 and actual capital expenditures for non-routine projects in Exhibit S-10.1, oftentimes the
13 amounts approved by the Commission exceed the Company's actual spending, even
14 when the Commission has made a disallowance.

15 Q. How will Staff's recommended disallowance impact rate base in this case?

16 A. As identified by the Company, this project is not expected to reach commercial
17 operations until March 2026.²⁷ Therefore, this project is classified as construction work
18 in progress (CWIP), and it will not impact the revenue requirement given the use of an
19 Allowance for Funds Used During Construction (AFUDC) offset. However, Staff felt it
20 important to identify the potential for these costs to not actually be incurred, given the

²⁶ See the Testimony of Staff witness Lisa Kindschy, Case No. U-21297 and the Testimony of Staff witness Jonathan DeCooman, Case Nos. U-20697 and U-20963.

²⁷ Testimony of Margaret E. Guillaumin, p. 51.

DIRECT TESTIMONY OF JONATHAN J. DECOOMAN
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PART II

1 lack of contracts to establish pricing and the tendency for the Company's cost estimates
2 to vary significantly at this stage in project development.

3 NWA: Adaptive Networked Microgrids Pilot:

4 Q. What is the nature of the project 'NWA: Adaptive Networked Microgrids Pilot'?

5 A. Company witness Shannen M. Hartwick describes this pilot opportunity in her testimony.
6 DTE has applied for grant funding from the United States Department of Energy (DOE)
7 through the Infrastructure Investment and Jobs Act (IIJA) to expand the Company's non-
8 wires alternative (NWA) work. This project would expand deployments at O'Shea Solar
9 Park and Port Austin substation to incorporate Adaptive Networked Microgrids (ANM)
10 into these sites. The Company plans for at least one additional distributed energy
11 resource (DER) site to be installed both at the O'Shea substation Solar Park and at Port
12 Austin substation to allow for these resources to work with existing DER installations to
13 create dynamic microgrids.²⁸

14 Q. What requests for recovery of capital expenditures is the Company making for the ANM
15 pilot in this case?

16 A. The Company has identified the total estimated cost of the pilot at approximately \$46
17 million, with approximately \$1 million in funding expected from the Company's partners
18 and \$23 million in grant funding expected from the DOE. The Company included its
19 requests for recovery for the ANM pilot on page 17, line 26, of Exhibit A-12, Schedule
20 B5.4, and included the assumed offset from outside contributions and DOE grant funding
21 on line 27 of the same exhibit. The Company is requesting recovery of \$4,606,000 and

²⁸ Testimony of Shannen M. Hartwick, pp. 76-77.

DIRECT TESTIMONY OF JONATHAN J. DECOOMAN
CASE NUMBER U-21534
PART II

1 \$25,550,000 in the bridge and test years, respectively. This is assumed to be offset by
2 partner contributions and DOE grant funding totaling \$2,609,000 and \$13,110,000 in the
3 bridge and test years, respectively.

4 Q. Has the Company previously requested recovery of capital expenditures for the ANM
5 pilot in an electric rate case?

6 A. No. While the Company identified this pilot as a potential opportunity to develop
7 microgrids while leveraging federal funding through the IIJA in its previous electric rate
8 case, Case No. U-21297, the Company did not include any costs for this project in its
9 requests in that case.²⁹

10 Q. Please describe the alternative sources of funding outside of its base rates that the
11 Company is seeking to fund the ANM pilot.

12 A. As detailed in the testimony of Company witness Hartwick, the Company has formed a
13 partnership with associated business organizations and research institutes, which will
14 provide approximately \$1 million in funding for the pilot.³⁰ The Company is seeking a
15 grant from the DOE through the IIJA and, if awarded, expects that half of the pilot costs,
16 or \$23 million, would be covered by this grant funding.³¹

17 Q. What is the status of the Company's grant application with the DOE for the ANM pilot?

18 A. The Company provided an update on the status of its grant application with the DOE in
19 response to Staff's discovery requests, sponsored as Exhibit S-10.7. The Company
20 identified the status of required documentation as part of the bid package and provided a
21 general timeline of the project, including the scope of work in each phase, as well as a

²⁹ Testimony of Brian L. Hill, Case No. U-21297, p. 68.

³⁰ Testimony of Shannen M. Hartwick, pp. 76-77.

³¹ *Id.*

DIRECT TESTIMONY OF JONATHAN J. DECOOMAN
CASE NUMBER U-21534
PART II

1 detailed project budget. When asked in a follow up data request for an update on the
2 status of the DOE's review of the Company's grant application, there was no additional
3 update to provide.³²

4 Q. Has the Company indicated whether it would continue to develop this project if it does
5 not receive the full amount of grant funding from the DOE?

6 A. The Company indicated that, if an agreement cannot be reached during award
7 negotiations, it does not anticipate continuing to develop this pilot.³³

8 Q. Does Staff have any recommendations for the Commission regarding the Company's
9 requests for recovery of capital expenditures for the ANM pilot?

10 A. Yes. Staff recommends a full disallowance of all requested capital expenditures for the
11 ANM pilot, totaling \$4,588,307 and \$25,550,184 in the bridge and test years,
12 respectively. Staff is also recommending the corresponding partner contributions and
13 grant funding which offset a portion of these costs be credited, to ensure this pilot has no
14 impact on the revenue requirement, totaling \$2,608,544 and \$13,109,827 in the bridge
15 and test years, respectively. While Staff is generally supportive of this pilot and the value
16 that it could provide the Company through the development and operation of adaptive
17 microgrids, Staff does not find it appropriate to include this pilot in rates when the status
18 of the Company's grant application is uncertain, particularly given the Company's
19 indication it would likely not proceed with this project if this grant funding is not
20 approved.

³² Exhibit S-10.7, p. 8.

³³ Exhibit S-10.7, p. 9.

DIRECT TESTIMONY OF JONATHAN J. DECOOMAN
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PART II

1 Q. Did the Company provide any additional information that could impact the development
2 of this pilot and Staff's position on the recovery of requested capital expenditures?

3 A. Prior to the filing of this testimony but after Staff's position had been finalized, the
4 Company submitted a discovery request, which has been sponsored as Exhibit S-10.8.
5 Exhibit S-10.8 is a comparison of project cost requests for certain distribution
6 investments in the Company's distribution grid plan (DGP) and requests for those same
7 projects in this case. Line 6 of Exhibit S-10.8 identifies spend for the NWA projects and
8 includes a comment appearing to indicate that the Company has received a grant from the
9 DOE for the ANM pilot. There is no other mention of this grant being awarded in any
10 other part of the filing, nor was this mentioned in Staff's discovery requests directly
11 asking for the status of this grant application. Without any further confirmation of the
12 result of the Company's award negotiations with the DOE and assurance that the \$23
13 million in grant funding has been awarded to the Company, Staff does not find it
14 reasonable to approve the Company's request for recovery of capital expenditures for the
15 ANM pilot.

16 Q. If the Company was to receive the full anticipated grant funding from the DOE and
17 proceeds with this pilot, could it still seek recovery of pilot costs?

18 A. Yes. Given the value that this pilot would provide to the Company and the potential to
19 leverage federal funding to reduce the impact to ratepayers, Staff finds the ANM pilot to
20 be worth further consideration by the Company. Staff's primary concerns with this pilot
21 is the lack of confirmation of this grant award and the uncertainty that leaves the pilot in.
22 Therefore, Staff would encourage the Company to include the costs for this pilot in a

DIRECT TESTIMONY OF JONATHAN J. DECOOMAN
CASE NUMBER U-21534
PART II

1 future rate case if the Company can provide evidence that it has successfully negotiated
2 for the full grant award package and is proceeding with its development.

3 Summary of Recommendations

4 Q. What recommendations are Staff providing to the Commission regarding the Company's
5 requests for approval of non-routine capital expenditures for projects included in Exhibit
6 A-12, Schedules B5.1 and B5.4?

7 A. Staff recommends the following adjustments to capital expenditures for non-routine
8 projects included on page 2 of Exhibit A-12, Schedule B5.1:

- 9 • Line 37 - Blackstart Project 10570 & 20255: Partial disallowance of \$297,000 and
10 \$314,000 in 2023 and 2024 bridge period capital expenditures, respectively;
- 11 • Line 38 - Blackstart Project 17611: Partial disallowance of \$54,000 and \$852,460 in
12 2023 and 2024 bridge period capital expenditures, respectively;
- 13 • Line 39 - Blackstart Project 18320: Partial disallowance of \$1,015,000 and \$62,000 in
14 2023 and 2024 bridge period capital expenditures, respectively;
- 15 • Line 40 - Slocum Battery Pilot: Partial disallowance of \$2,177,871 in 2024 bridge
16 period capital expenditures;
- 17 • Line 41 - Trenton Channel Energy Center BESS: Partial disallowance of \$1,612,000
18 and \$8,298,000 in 2023 and 2024 bridge period capital expenditures, respectively. This
19 adjustment does not impact rate base due to the project being classified as CWIP with an
20 AFUDC offset.

21 Staff recommends the following adjustment to capital expenditures for projects included
22 on page 17 of Exhibit A-12, Schedule B5.4:

DIRECT TESTIMONY OF JONATHAN J. DECOOMAN
CASE NUMBER U-21534
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- 1 • Line 27 - NWA: Adaptive Networked Microgrids: Full disallowance of \$4,588,307 and
2 \$25,550,184 in 2024 bridge period and test year capital expenditures, respectively.
- 3 • Line 28 – Offset of ANM pilot for partner contributions and grant funding, credited as
4 \$2,608,533 and \$13,109,827 in 2024 bridge period and test year capital expenditures,
5 respectively.
- 6 Q. Does this conclude your testimony?
- 7 A. Yes, it does.

1 MR. ORRIS: Staff moves to bind in the
2 Direct Testimony of Roger A. Doherty, consisting of a
3 cover sheet and seven pages of qualifications, questions,
4 and answers. Mr. Doherty sponsored no exhibits.

5 JUDGE WALLACE: Is there any objection to
6 binding in the testimony of Mr. Doherty?

7 Hearing none, the testimony is bound in.

8 (Testimony bound in.)

9 - - -

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * * *

In the matter of the application of)
DTE ELECTRIC COMPANY for)
 authority to increase its rates, amend its)
 rate schedules and rules governing the)
 distribution and supply of electric energy,)
 and for miscellaneous accounting authority.)
 _____)

Case No. U-21534

QUALIFICATIONS AND DIRECT TESTIMONY OF
ROGER A. DOHERTY
MICHIGAN PUBLIC SERVICE COMMISSION

July 26, 2024

QUALIFICATIONS OF ROGER A. DOHERTY
CASE NUMBER U-21534
PART I

1 Q. Would you please state your name and business address for the record?

2 A. My name is Roger A. Doherty. My business address is 7109 West Saginaw
3 Highway, Lansing, Michigan 48917.

4 Q. What is your position and by whom are you employed?

5 A. I am the Manager of the Resource Adequacy and Forecasting Section within the
6 Energy Resources Division of the Michigan Public Service Commission (MPSC
7 or Commission).

8 Q. Would you please outline your educational background?

9 A. I earned a Bachelor of Science Degree in Biosystems Engineering and a Bachelor
10 of Science Degree in Environmental Studies & Applications with a Specialization
11 in Environmental Economics from Michigan State University in 2005. Since
12 joining the MPSC Staff (Staff), I have attended several training programs hosted
13 by the Michigan State University Institute of Public Utilities, including the
14 Annual Regulatory Studies Program sponsored by the National Association of
15 Regulatory Utility Commissioners (August 2017), Modeling Utility Financial
16 Impacts in a Dynamic World (September 2017), and Grid School (April 2018). I
17 have also attended several EUCI training courses, including Resource and
18 Portfolio Planning, Modeling and Monetizing Uncertainty and Risk Associated
19 with Renewables (August 2017); Long-Term Load Forecasting in MS Excel
20 (August 2018); and the Integrated Resource Planning Summit (March 2019).

21 Q. Would you please outline your professional background?

22 A. In July 2006, I began working for the State of Michigan in the Michigan Energy
23 Office as a Staff Engineer. At the Michigan Energy Office, I was responsible for

QUALIFICATIONS OF ROGER A. DOHERTY
CASE NUMBER U-21534
PART I

1 a variety of technical assistance and financial incentive programs for energy
2 efficiency and renewable energy projects in the industrial, commercial, and
3 residential sectors. I also was responsible for energy code compliance programs,
4 economic development programs focused on technology roadmaps, and advanced
5 energy technology acceleration services.

6 In June 2017, I joined the MPSC as a Public Utilities Engineer within
7 the Resource Adequacy and Retail Choice Section, now known as the Resource
8 Adequacy and Forecasting Section. At the MPSC, I evaluate integrated resource
9 plans (IRP) and resource adequacy plans of utilities and alternative electric
10 suppliers, review capacity demonstrations to ensure they meet federal and state
11 requirements, and develop/analyze generation expansion planning models. I
12 became the Manager of the Resource Adequacy and Forecasting Section in
13 December 2022.

14 Q. Have you previously testified in cases before the Commission?

15 A. Yes, I have testified in the following cases:

16 Case No. Description

17 U-18444 Contested case proceeding for determining the process and
18 requirements for a forward locational requirement under MCL
19 460.6(w).

20 U-20165 Consumers Energy Company's IRP pursuant to MCL 460.6(t).

21 U-20300 Alpena Power Company's IRP pursuant to MCL 460.6(t).

22 U-20471 DTE Electric Company's IRP pursuant to MCL 460.6(t).

23 U-20591 Indiana Michigan Power Company's IRP pursuant to MCL 460.6(t).

QUALIFICATIONS OF ROGER A. DOHERTY
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PART I

1	U-20766	Consumers Energy Company's reconciliation of its 2019 demand
2		response (DR) program costs.
3	U-20793	DTE Electric Company's reconciliation of its 2019 DR program costs.
4	U-20836	DTE Electric Company's electric rate case.
5	U-20963	Consumers Energy Company's electric rate case.
6	U-21044	DTE Electric Company's reconciliation of its 2020 DR program costs.
7	U-21080	Consumers Energy Company's reconciliation of its 2020 DR program
8		costs.
9	U-21081	Upper Michigan Energy Resources Corporation's IRP pursuant to
10		MCL 460.6(t).
11	U-21090	Consumers Energy Company's IRP pursuant to MCL 460.6(t).
12	U-21189	Indiana Michigan Power Company's IRP pursuant to MCL 460.6(t).
13	U-21233	Consumers Energy Company's reconciliation of its 2021 DR program
14		costs.
15	U-21224	Consumers Energy Company's electric rate case.
16	U-21242	DTE Electric Company's reconciliation of its 2021 DR program costs.
17	U-21193	DTE Electric Company's IRP pursuant to MCL 460.6(t).
18	U-21297	DTE Electric Company's electric rate case.
19	U-21370	Upper Michigan Energy Resources Corporation's State Reliability
20		Mechanism case.
21	U-21389	Consumers Energy Company's electric rate case.
22	U-21410	Consumers Energy Company's reconciliation of its 2022 DR program
23		costs.

QUALIFICATIONS OF ROGER A. DOHERTY
CASE NUMBER U-21534
PART I

1 || U-21461 Indiana Michigan Power Company's electric rate case.

DIRECT TESTIMONY OF ROGER A. DOHERTY**CASE NUMBER U-21534****PART II**

1 Q. What is the purpose of your testimony?

2 A. The purpose of my testimony is to provide Staff's recommendations on DTE
3 Electric Company's (DTE or the Company) electric rate case regarding Demand
4 Response (DR).

5 Q. Are you sponsoring any exhibits?

6 A. No.

7 Q. Does Staff have any recommendations regarding Demand Response?

8 A. Yes. I will describe Staff's recommendations related to the treatment of
9 previously disallowed capital costs from the Company's 2021 DR reconciliation,
10 as well as the recommendation that the Company expand its analysis of the cost
11 effectiveness of its DR programs in future cases.

12 Q. What is the Company requesting with respect to the disallowed capital in the 2021
13 DR Reconciliation?

14 A. Company witness Keegan O. Farrell describes the Company's request on pages
15 24 and 25 of his direct testimony. The Company is requesting Commission
16 approval to recover \$1,672,895 in capital costs for the SmartCurrents program
17 that were originally disallowed in the Company's 2021 DR reconciliation (Case
18 No. U-21242).

19 Q. Does Staff agree with the Company's request to recover these costs?

20 A. No. Staff's recommendation with respect to these costs has not changed. Staff
21 supported this disallowance because the Company significantly exceeded what
22 was preapproved in the Company's 2019 Integrated Resource Plan (Case No. U-
23 20471) for this program, failed to communicate with Staff that it was exceeding

DIRECT TESTIMONY OF ROGER A. DOHERTY**CASE NUMBER U-21534****PART II**

1 investment by more than 10% as previously agreed, and that the benefits from the
2 increased investment did not exist or were unclear. Staff argued for this
3 disallowance in the 2021 DR Reconciliation, as well as the 2022 DR
4 Reconciliation (Case No. U-21403) where the issue reemerged. The Company and
5 Staff reached settlement agreements in both the 2021 and 2022 DR Reconciliation
6 cases that incorporated this disallowance, and the Commission approved those
7 settlements in the January 19, 2023 Order in Case No U-21242 and the March 15,
8 2024 Order in Case No. U-21403. The Company should not be allowed to recover
9 these investments in this case.

10 Q. Does an adjustment need to be made to incorporate Staff's recommendation that
11 this disallowance remain?

12 A. No. As stated by Company witness Farrell on page 25 of his direct testimony, the
13 Company did not include the disallowed capital in its balance sheet. An
14 adjustment would be necessary if the Commission were to agree with the
15 Company that the previously disallowed costs should now be recovered.

16 Q. What is Staff recommending with respect to the analysis of the cost effectiveness
17 of its DR programs?

18 A. Staff is recommending the Company expand its analysis of the cost effectiveness
19 of its DR programs to include all DR programs, as well as its interruptible rates.
20 The Company has been including cost effectiveness analysis in its DR
21 reconciliation cases for some of its DR programs, specifically its CoolCurrents,
22 Smart Savers, SmartCurrents, and Rider 12 programs. Staff would like to see
23 similar analysis of the Company's remaining DR programs, including its

DIRECT TESTIMONY OF ROGER A. DOHERTY**CASE NUMBER U-21534****PART II**

1 interruptible rates. This analysis should look at each program and/or rate
2 individually and compare the costs of the program/rate to the benefits. The
3 benefits of each program should incorporate reasonable assumptions about the
4 impact of recent and future changes at the Midcontinent Independent System
5 Operator (MISO), such as potential changes to Load Modifying Resource
6 Accreditation. The Company should perform an analysis of each program that
7 includes historical costs and a separate analysis that excludes any sunk costs and
8 looks only at future costs and/or future cost projections. The Company should
9 include customer incentives, including lower rates, as part of the cost of these
10 programs/rates. The Company should also include a reasonable portion of any
11 costs shared by multiple programs (or the entire DR portfolio) in the analysis of
12 each individual program. The Company should include this analysis in its next
13 DR Reconciliation or General Rate Case, whichever happens sooner.

14 Q. Does this conclude your testimony?

15 A. Yes.

1 MR. ORRIS: Staff moves to bind in the
2 testimony, Direct Testimony of Allan D. Freeman,
3 consisting of a cover sheet and ten pages of
4 qualifications, questions, and answers. Mr. Freeman
5 sponsored no exhibits.

6 JUDGE WALLACE: Is there any objection to
7 binding in the direct testimony of Mr. Freeman?

8 Hearing none, the testimony is bound in.
9 (Testimony bound in.)

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STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * * *

In the matter of the application of	)	
DTE ELECTRIC COMPANY for	)	
authority to increase its rates, amend its	)	
rate schedules and rules governing the	)	Case No. U-21534
distribution and supply of electric energy,	)	
and for miscellaneous accounting authority.	)	
_____	)	

QUALIFICATIONS AND DIRECT TESTIMONY OF
ALLAN D. FREEMAN
MICHIGAN PUBLIC SERVICE COMMISSION

July 26, 2024

QUALIFICATIONS OF ALLAN D. FREEMAN
CASE NUMBER U-21534
PART I

1 Q. Please state your full name and business address for the record.

2 A. My name is Allan David Freeman, and my business address is 7109 W. Saginaw Hwy.,
3 Lansing, MI 48917.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission (MPSC or Commission) as an
6 Assistant to the Division Director in the Energy Resources Division.

7 Q. Please describe your educational background.

8 A. I hold three degrees. In 2000, I earned a Juris Doctor and a Masters of Public
9 Administration, both from the University of Pittsburgh. I earned a Bachelor of Arts in
10 International Relations from Michigan State University in 1996.

11 Q. What is your professional background?

12 A. In 2009, I began working for the MPSC in the Energy Markets Section in the Operations
13 and Wholesale Markets Division. My responsibilities included representing Michigan and
14 advocating policy objectives during meetings of the Organization of MISO States (OMS)
15 and the Organization of Pennsylvania-New Jersey-Maryland Interconnection (PJM) States,
16 Inc. I coordinated regulatory oversight and policy formation among the states.
17 Additionally, I collaborated to perform analysis and evaluation on the elements of existing
18 and future market designs. I served as co-chair of OMS's Market and Tariff workgroup. I
19 attended the Eastern Interconnection States' Planning Council, Federal Energy Regulatory
20 Commission (FERC), Midcontinent Independent System Operator (MISO), and PJM
21 Interconnection stakeholder work groups and committee meetings. Lastly, I drafted
22 speeches for MPSC Commissioners (Commissioners).

QUALIFICATIONS OF ALLAN D. FREEMAN**CASE NUMBER U-21534****PART I**

1 In 2015, I became an Executive Policy Advisor in the Research Section of the
2 Strategic Operations Division. In this role, I advised the Commissioners on policy and
3 technical matters pertaining to the Commission's regulatory and policy-making
4 responsibilities across all regulated sectors. I assisted the Commissioners during
5 deliberations on decisions in general rate cases, certificate of need proceedings, energy law
6 implementation, and electricity and natural gas fuel cost cases. Additionally, I negotiated
7 decisions on behalf of the Commissioners. I conducted research on emerging jurisdictional,
8 structural, and technical issues in the utility industries. I represented the Commissioners in
9 various capacities and functions involving industry and the public.

10 In 2020, I became the Assistant to the Division Director in the Energy Resources
11 Division. This division is responsible for implementation of the State's Clean & Renewable
12 Energy and Energy Waste Reduction Act, evaluating certificate of necessity and integrated
13 resource plan filings, reviewing Smart Grid utility investments, administration of
14 Michigan's gas and electric customer choice programs, and electric resource adequacy and
15 modeling. I assist the Energy Resources Division Director in program planning, policy and
16 procedures development, and research. I review testimony for contested case proceedings.
17 I represent the Director in meetings, settlement conferences, and task forces. I serve as the
18 MPSC Staff (Staff) lead for our internal electric vehicles team. Lastly, I co-chaired the
19 Commission's Diversity, Equity, and Inclusion initiative.

20 Q. Have you received any work-related training since your employment with the MPSC?

21 A. Yes, I have attended several programs hosted by the Institute of Public Utilities (IPU) at
22 Michigan State University: the Michigan Forum on Economics and Regulatory Policy, the
23 Annual Regulatory Studies Program, IPU's Grid and Rate Schools, the National

QUALIFICATIONS OF ALLAN D. FREEMAN**CASE NUMBER U-21534****PART I**

1 Regulatory Research Institute, and several Advanced Regulatory Studies Program
2 sessions.

3 Q. Have you previously filed testimony before the Commission?

4 A. Yes. I have filed testimony in the following cases: U-20836, DTE Electric's 2022 Rate
5 Case; U-21224, Consumers Electric's 2022 rate case; U-21279, DTE Electric's 2023 rate
6 case; U-21389, Consumers Electric's 2023 rate case; and U-21461, Indiana Michigan
7 Power Company's 2024 rate case.

8 Q. Have you worked to analyze any cases filed before the Commission?

9 A. Yes, in my role as Commission Advisor, I assisted in the deliberations on many different
10 types of cases. I was intimately involved in both electric and gas rate cases, Certificate of
11 Need proceedings, Integrated Resource Plan (IRP) cases, Securitization proceedings,
12 reliability dockets, renewable energy cases, and the MI PowerGrid stakeholder initiatives.

DIRECT TESTIMONY OF ALLAN D. FREEMAN
CASE NUMBER U-21534
PART II

1 Q. What is the purpose of your testimony?

2 A. The purpose of my testimony is to present MPSC Staff's analysis of DTE Electric's (DTE
3 or the Company) electric vehicle (EV) rate case proposals.

4 Q. Are you sponsoring any exhibits?

5 A. No.

6 **Electric Vehicle Proposals**

7 Q. What is the current status of DTE Electric's Charging Forward Program?

8 A. The Company's EV program has matured and grown in scope since its 2019 inception in
9 Case No. U-20162. Some programmatic elements have become permanent, like Education
10 and Outreach, the Emerging Technology Fun, and Program Administration.¹ Other
11 elements are still in the pilot stage, like Home Charger Rebates, Home Charger Install, EV
12 Rebates, Business Charger Rebates, Business Charger Installation, eFleet Charger Rebate,
13 eFleet Battery Support, School Bus Chargers, and Charging Hubs.² The Company
14 continues to use regulatory asset accounting treatment.³ To date, DTE Electric has spent
15 \$51.3 million for its EV programs.⁴

16 Q. Is DTE Electric actively seeking federal dollars for its EV programs?

17 A. Staff appreciates the Company's efforts to take advantage of the Federal Government's
18 various EV funding sources. Given the multiple funding resources and DTE Electric's
19 various EV efforts, it can be challenging to keep track of everything. Staff requests that in
20 its next rate case, the Company provide a list of what federal EV programs they have

¹ Prefiled Direct Testimony of Company witness Pina Bennett, p. 5.

² *Id.*

³ *Id.*

⁴ *Id.*, at, p. 6.

DIRECT TESTIMONY OF ALLAN D. FREEMAN
CASE NUMBER U-21534
PART II

1 applied for, and, if successful, how much funding they were awarded. This information
2 would be useful in analyzing future EV funding requests.

3 Q. How does Staff view the School Bus Chargers program?

4 A. Staff is excited to see how this program develops. It offers a great opportunity for policy
5 entrepreneurship. In its next rate case, Staff would like the Company to share in detail how
6 the program is performing, and the early lessons learned.

7 Q. Does Staff have any concerns about the Company's Charging Hubs proposal?

8 A. Staff is increasingly concerned about DTE Electric's Charging Hubs plans. The
9 Commission first approved the Company owning (and thus getting cost recovery for) the
10 Charging Hubs in November 2022. The Charging Hubs pilot was announced with fanfare.
11 However, the Charging Hubs are still in the design and planning stage. Company witness
12 Bennett briefly touches upon the Charging Hub pilot status in a single paragraph in her
13 testimony.⁵

14 Staff finds this insufficient and requests a more detailed explanation of why the
15 Company's efforts are moving along so slowly. Staff wants the Company to either offer a
16 more complete Charging Hub analysis and explanation in its reply testimony or hold an
17 interested parties meeting to discuss why there has been such slow momentum to this pilot.
18 Additionally, in the future, Staff expects a much more thorough Charging Hubs explanation
19 in both the Company's next rate case and its EV annual report.

20 Q. Does Staff have any suggestions for DTE's Emerging Technology Fund?

21 A. Staff participates in an ex officio role with the Emerging Technology Fund committee.
22 Earlier this year, the Company selected its first funding recipients. These projects offer a

⁵ Prefiled Direct Testimony of Company witness Bennett, p. 11.

DIRECT TESTIMONY OF ALLAN D. FREEMAN**CASE NUMBER U-21534****PART II**

1 great opportunity to learn more about EV engineering and policy. Since the Emerging
2 Technology Fund is funded in through the traditional rate case process, Staff would like a
3 yearly update about the pilots and what the Company has learned from them. This report
4 would be included in future Company's rate case filings until the Emerging Technology
5 Fund ends. If the Company does not file a rate case within a calendar year, the report then
6 should be included in the Company's yearly EV annual reports.

7 Q. What is a Transportation Electrification Plan (TEP)?

8 A. The movement toward transportation electrification will require additional planning and
9 will result in necessary investments by regulated electric utilities in the coming years. A
10 TEP details how a regulated electric utility will navigate these challenges. A TEP
11 documents how a regulated electric utility plans to address the operational, policy, and
12 system impacts of electric vehicles in its footprint. Unlike rate cases which typically
13 involve a single year, a TEP examines an intermediate time frame in the future. The TEP
14 docket is intended to create dialogue among all interested parties. The TEPs are
15 informational only and are not intended for cost recovery. A regulated electric utility can
16 only recover its costs in a traditional rate case.

17 Q. What has the Commission done to date with TEPs?

18 A. The Commission opened Case No. U-21538 to be a repository for TEPs. In Case No. U-
19 20836, the Commission asked DTE Electric to file a TEP. Subsequently, the Commission
20 also directed Consumers Energy and Indiana Michigan Power Company to do the same.
21 Both Consumers Energy and DTE Electric have already filed their plans.

22 Q. What should a TEP contain?

DIRECT TESTIMONY OF ALLAN D. FREEMAN
CASE NUMBER U-21534
PART II

1 A. In Case No. U-21492, the Commission directed Staff to create draft TEP filing
2 requirements. The draft filing requirements have been posted in the docket for all interested
3 parties to review. All comments are due by July 22, 2024, and any reply comments are due
4 by August 12, 2024. Additionally, there will be a virtual interested parties meeting on
5 August 21, 2024. The Commission will then issue a TEP filing requirements order later
6 this year.

7 Q. Since DTE Electric's TEP was filed before the draft filing requirements were issued, how
8 should the Commission address their current TEP?

9 A. The Company's current rate case is not the appropriate venue for discussion and criticism
10 of its TEP. Rates cases are increasingly becoming more complex and have a strict time
11 frame. Instead, Staff proposes to adopt a similar strategy as the Commission is employing
12 in Case No. U-20147 for its examination of distribution plans. Staff will work with the
13 Company to set up a process for all interested parties to review and comment on their TEP.
14 Additionally, there would be a period for any reply comments. This proposed schedule
15 would be filed in Case No. U-21538. Such a process would allow for a more robust and
16 holistic TEP conversation outside of the restrictions found in a rate case.

17 Q. How much is the Company requesting in its current rate case for its EV programs?

18 A. DTE Electric is requesting \$24,980,000 to fund its proposed EV efforts. To put this number
19 in perspective, the Company has spent a total of \$51.3 million for its EV program to date.⁶

20 Q. What is Staff's reaction to the Company's proposed EV budget?

21 A. In its current rate case, DTE Electric is proposing to begin its TEP implementation. Staff
22 appreciates the Company's ambition and its commitment to an EV future. However, Staff

⁶ Prefiled Direct Testimony of Company witness Bennett, p. 4.

DIRECT TESTIMONY OF ALLAN D. FREEMAN
CASE NUMBER U-21534
PART II

1 advocates for a more cautious approach with rate payers' dollars at this juncture. As
2 Company witness Bennett noted in her testimony, EVs are still relatively new and
3 evolving.⁷ While EV adoption continues to increase, the pace has slowed. The Company
4 can still achieve many of its EV goals, while adopting a more cautious approach to program
5 spending.

6 Q. Is Staff recommending any disallowances to reflect a more cautious EV approach going
7 forward?

8 A. Company witness Bennett's Exhibit A-12, Schedule B5.9, presents DTE Electric's EV cost
9 projections. After analyzing the exhibit, Staff is recommending two disallowances. First,
10 Staff recommends an \$8,000,000 disallowance to the Company's Business and eFleet
11 Charger Rebates program. Additionally, Staff recommends a \$1,000,000 disallowance for
12 its Residential Customer Rebate program.

13 Q. What is Staff's rationale for the \$8,000,000 disallowance?

14 A. In Company witness Bennett's Exhibit A-12, Schedule B5.9, Line 18, the Company is
15 requesting \$16,002,000 for its Business and eFleet Charger Rebates. This line item includes
16 public, fleet, and multi-user dwellings programs. DTE Electric proposes a number of
17 changes to its existing programs for these three segments.

18 Staff recommends an \$8 million disallowance. The Business and eFleet Charger
19 Rebates \$16 million request is the foundational piece of the Company's overall
20 \$24,980,000 proposed EV budget request. Staff is uncomfortable with this large, requested
21 amount. It represents a significant increase from past rebate programs. Instead, Staff would
22 like to see the Company implement a scaled down rebate effort. By moving at a more

⁷ Prefiled Direct Testimony of Company witness Bennett, p. 50.

DIRECT TESTIMONY OF ALLAN D. FREEMAN
CASE NUMBER U-21534
PART II

1 deliberate speed, DTE Electric would still be able to discover if its revised rebates plans
2 accomplish their intended goals.

3 Q. What is Staff's rationale for the \$1,000,000 disallowance?

4 A. In Company witness Bennett's Exhibit A-12, Schedule B5.9, Line 17, the Company is
5 requesting \$3,126,000 for its Residential Customer Rebate program. This is an increase
6 from its last rate case. These rebates have been part of DTE Electric's efforts since its
7 inception. However, as the Company's EV programs have matured, these rebates make
8 less sense now. Any rebate program needs to be narrowly focused to address a specific EV
9 policy challenge.

10 Staff agrees with DTE Electric that the low-income segment faces unique
11 challenges for EV adoption and infrastructure. The Company is proposing some changes
12 to its existing EV programs to better focus on this segment. Before awarding the full
13 \$3,126,000, Staff would like to see if the Company's efforts successfully address these
14 challenges. If these revised programs have a real impact, DTE Electric can seek additional
15 funding in a subsequent rate case. Consequently, Staff recommends a \$1,000,000
16 disallowance.

17 Q. Please summarize Staff's recommendations below.

18 A. Staff's recommendations are as follows:

19 1. In its next rate case, DTE Electric should provide a list of all federal EV dollars it has
20 been awarded.

21 2. In its next rate case, the Company will discuss in detail its School Bus Charger program
22 and share any initial results from the program.

DIRECT TESTIMONY OF ALLAN D. FREEMAN
CASE NUMBER U-21534
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1 3. DTE Electric will provide a more detailed explanation on why the Charging Hubs project
2 is moving so slowly.

3 4. In its next rate case, the Company will provide a report on the results from the initial
4 awards from its Emerging Technology Fund.

5 5. The discussion and evaluation of DTE Electric's TEP will be deferred to a future date
6 and proceeding, as per Staff's proposal.

7 6. An \$8,000,000 disallowance for the Company's Business and eFleet Charger Rebates
8 program.

9 7. A \$1,000,000 disallowance for the Company's Residential Customer Rebates program.

10 Q. Does this conclude your testimony?

11 A. Yes.

1 MR. ORRIS: Staff moves to bind in the
2 Direct Testimony of Lauren Fromm, consisting of a cover
3 sheet and five pages of qualifications, questions, and
4 answer. Ms. Fromm sponsored no exhibits.

5 JUDGE WALLACE: Is there any objection to
6 binding in the testimony of Ms. Fromm?

7 Hearing none, the testimony is bound in.

8 (Testimony bound in.)

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S T A T E O F M I C H I G A N
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the application of)
DTE ELECTRIC COMPANY)
for authority to increase its rates, amend)
its rate schedules and rules governing the)
distribution and supply of electric energy, and)
for miscellaneous accounting authority.)

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Case No. U-21534

QUALIFICATIONS AND DIRECT TESTIMONY OF
LAUREN FROMM
MICHIGAN PUBLIC SERVICE COMMISSION

1 Q. Please state your full name and business address for the record.

2 A. My name is Lauren Fromm and my business address is 7109 W. Saginaw Hwy.,
3 Lansing, MI 48917.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission (MPSC or
6 Commission) as a State Administrative Manager of the Data Access, Privacy &
7 IT Section of the Customer Assistance Division.

8 Q. Please describe your educational background.

9 A. I earned a Bachelor of Science in Civil Engineering from Western Michigan
10 University in 2013.

11 Q. What is your professional experience?

12 A. In 2013, I began working for the MPSC in the Smart Grid Section. My
13 responsibilities include performing analysis of utilities' rate case cost recovery
14 requests related to Advanced Metering Infrastructure (AMI), Automated Meter
15 Reading (AMR), Customer Experience and Information Technology (IT), as well
16 as monitoring smart energy programs and serving as a member of the MPSC
17 Staff's (Staff) Demand Response and Electric Vehicles team. The Smart Grid
18 Section has been renamed the Data Access, Privacy & IT Section and has
19 expanded its scope to include issues regarding customer data accessibility and
20 privacy.

21 Q. Have you received any work-related training since your employment with the
22 MPSC?

1 A. Yes, I have attended several programs hosted by the Institute of Public Utilities
2 (IPU) at Michigan State University, IPU's Grid and Rate Schools, and a number
3 of Advanced Regulatory Studies Program sessions. I have also attended
4 Regulatory Training Initiative's (RTI) How to Read and Analyze a Rate Case
5 training as well as NARUC's Rate School.

6 Q. Have you previously filed testimony before the Commission?

7 A. Yes. I have filed testimony in the following cases:

- 8 - Case No. U-17735, Consumers Energy's electric rate case
- 9 - Case No. U-17882, Consumers Energy's gas rate case
- 10 - Case No. U-17990, Consumers Energy's electric rate case
- 11 - Case No. U-18124, Consumers Energy's gas rate case
- 12 - Case No. U-18322, Consumers Energy's electric rate case
- 13 - Case No. U-18424, Consumers Energy's gas rate case
- 14 - Case No. U-20276, Upper Peninsula Power Company's electric rate case
- 15 - Case No. U-20322, Consumers Energy's gas rate case
- 16 - Case No. U-20359, Indiana Michigan's electric rate case
- 17 - Case No. U-20476, SEMCO's gas rate case
- 18 - Case No. U-20650, Consumers Energy's gas rate case
- 19 - Case No. U-20697, Consumers Energy's electric rate case
- 20 - Case No. U-20963, Consumers Energy's electric rate case
- 21 - Case No. U-21148, Consumers Energy's gas rate case
- 22 - Case No. U-21224, Consumers Energy's electric rate case
- 23 - Case No. U-21286, Upper Peninsula Power Company's electric rate case

- 1 - Case No. U-21308, Consumers Energy's gas rate case
- 2 - Case No. U-21389, Consumers Energy's electric rate case
- 3 - Case No. U-21405, Upper Michigan Electric Resources Corporation's request to
- 4 amend its Rate Book for Electric Service to provide customers a non-standard
- 5 metering option
- 6 - Case No. U-21461, Indiana Michigan Power Company's electric rate case
- 7 - Case No. U-21490, Consumers Energy's gas rate case
- 8 -Case No. U-21555, Upper Peninsula Power Company's electric rate case

1 Q. What is the purpose of your testimony in this proceeding?

2 A. The purpose of my testimony is to present the Michigan Public Service
3 Commission Staff's (Staff) recommendation regarding DTE Electric Company's
4 (DTE or Company) request for recovery of capital expenditures categorized as
5 "Other Miscellaneous" for the bridge year and projected test year.

6 Q. Are you sponsoring any exhibits in this proceeding?

7 A. Yes. I am sponsoring the following exhibits:
8 Exhibit S-9.0: Supporting Audit Response LF-1.1a

9 Q. Were these exhibits prepared by you or under your direction?

10 A. Yes.

11 Q. What is the Company requesting recovery of for the line item "Other
12 Miscellaneous" on Exhibit A-12 Schedule B5.8?

13 A. The Company is requesting recovery of \$1.7 million in capital expenditures in
14 2024 and 2025 for environmental management.¹ Also included in this line item is
15 the offset for investment recovery salvage sales. Due to the offset, the Company
16 is requesting total recovery of -\$3.185 million in the historical period 12 months
17 ended 12/31/2022, -\$1.524 million in bridge period 12 months ending
18 12/31/2023, \$0.150 million in the bridge period 12 months ending 12/31/2024 and
19 \$0.150 million for the projected test year 12 months ending 12/31/2025.

20 Q. What is Staff's recommended adjustment for the "Other Miscellaneous" line
21 item?

¹ Direct Testimony of Company Witness Theresa M. Uzenski, p. 66

1 A. Staff is recommending the Commission disallow \$720,000 in projected capital
2 expenditures in both 2024 and 2025.

3 Q. Please explain Staff's recommendation.

4 A. Staff is recommending a disallowance of \$720,000 to the Company's projected
5 2024 and 2025 capital expenditures because this is the amount that the Company
6 has identified is being projected for emergent spend for a project for underground
7 storage tank removal and cleanup. (Exhibit S-9.0.) The Company is planning to
8 spend \$1.2 million in each 2024 and 2025 for this project and has identified that
9 40% of this projection is for planned work, while the remaining 60% is for
10 emergent spend. Staff recommends the Commission disallow the expenditures
11 included in the Company's projection for emergent spend because it is not for any
12 specific work at this time. These expenditures may not incur in full, if at all, and
13 the Commission cannot perform retroactive ratemaking to correct rates, should
14 that be the case. It is not reasonable to pass these expenditures onto customers at
15 this time, because they cannot be judged for their reasonableness and prudence.

16 Q. Does this conclude your testimony?

17 A. Yes.

1 MR. ORRIS: Staff moves to bind in the
2 Direct Testimony of Brittany Klocke, consisting of a
3 cover sheet and six pages of qualifications, questions,
4 and answers. Ms. Klocke sponsored the following
5 exhibits: S-18.1, S-18.2, S-18.3, and that's it.

6 JUDGE WALLACE: Is there any objection to
7 binding in the direct testimony of Ms. Klocke?

8 Hearing none, the testimony is bound in.

9 Is there any objection to the admission
10 of Exhibits S-18.1, S-18.2, or S-18.3?

11 Hearing none, those exhibits are
12 admitted.

13 (Testimony bound in.)

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S T A T E O F M I C H I G A N
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the application of)
DTE ELECTRIC COMPANY)
 for authority to increase its rates,)
 amend its rate schedules and)
 rules governing the distribution and)
 supply of electric energy, and for)
 miscellaneous accounting authority.)
 _____)

Case No. U-21534

QUALIFICATIONS AND DIRECT TESTIMONY OF
BRITTNEY KLOCKE
MICHIGAN PUBLIC SERVICE COMMISSION

1 Q. Please state your full name and business address.

2 A. My name is Brittney Klocke and my business address 7109 West Saginaw
3 Highway, Lansing, MI 48917.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission (MPSC or
6 Commission) as a Senior Analyst in the Data Access, Privacy and IT (DAPIT)
7 Section of the Customer Assistance Division (CAD).

8 Q. Please describe your educational background.

9 A. I earned a Bachelor of Arts degree in Political Science from Miami University in
10 2006 and a Juris Doctor degree from Michigan State University College of Law in
11 2009.

12 Q. Please describe your professional experience.

13 A. I began my professional career with the State of Michigan in 2010, when I was
14 hired as an Eligibility Specialist with the Department of Health and Human
15 Services (DHHS). While with DHHS, I worked in a Specialized Medicaid Unit
16 that reviewed retroactive and opened ongoing Medicaid cases.

17 In 2011, I accepted a position with the Department of Treasury
18 (Treasury) as a Field Officer in the Collection Services Bureau. In that role, I was
19 primarily tasked with performing research and analysis assignments related to
20 various tax laws administered by Treasury. That entailed conducting field calls at
21 businesses all over Michigan to verify taxpayer compliance and registration
22 status, as well as identifying complex schemes related to tax avoidance and fraud.

1 In July 2022, I accepted my current position with the MPSC. In this
2 role, I perform analysis of utilities' rate case recovery requests related to
3 Customer Experience and Information Technology (IT).

4 Q. Have you received any work-related training since your employment with the
5 MPSC?

6 A. Yes. I attended Michigan State University's Institute for Public Utilities' (IPU)
7 Annual Regulatory Studies Program in August of 2022. In September of 2022, I
8 attended IPU's Accounting & Ratemaking Course. In March of 2023, I attended
9 the National Association of Regulatory Utility Commissioners' Rate Case Basics
10 course.

11 Q. Have you previously filed testimony before the Commission?

12 || A. Yes.

13 Q. Please list the cases in which you have filed testimony before the Commission.

14 A. I filed testimony in Case No. U-21308, the Consumers Energy gas case, Case No.
15 U-21297, the DTE electric case, Case No. U-21389, the Consumers Energy
16 electric case, Case No. U-21461, the Indiana Michigan Power Company electric
17 case, Case No. U-21490, the Consumers Energy gas case, and U-21540, the
18 Michigan Gas Utilities gas case.

1 Q. What is the purpose of your testimony in this proceeding?

2 A. The purpose of my testimony is to present MPSC Staff's (Staff) recommendations
3 regarding DTE Electric Company's (DTE or the Company) Error Free
4 Communication (EFC) and Outage map projects, from Exhibit A-12, Schedule
5 B5.4 Distribution Plant – Technology and Automation and Exhibit A-24,
6 Schedule N7.

7 Q. Are you sponsoring any exhibits in this proceeding?

8 A. Yes, I am sponsoring the following exhibits:

9 S-18.1 – Audit Response BMK-1.2

10 S-18.2 – Audit Response BMK-1.3

11 S-18.3 – Audit Response BMK-1.4

12 Q. Were these exhibits prepared by you or under your supervision?

13 A. Yes.

14 Q. Please provide a summary of your testimony.

15 A. My testimony explains Staff's recommendations regarding the Company's Outage
16 digital transactions, namely the Error Free Communication (EFC) Project.

17 Q. What are Staff's recommendations regarding the Error Free Communication
18 Project?

19 A. Though Staff does not recommend any monetary adjustments to the requested
20 expenditures for the Error Free Communication and Outage map projects, there
21 are recommendations regarding those projects that Staff proposes. Staff supports
22 and understands the Company's need to spend money on these projects, and
23 believes they are worthy projects that have important value for customers. As

1 described in Company witness Michael Hatsios' direct testimony, the focus for
2 these projects is "the improvement of the timeliness and accuracy with which we
3 provide customer power status updates, restoration estimates, and other outage
4 information and notifications."¹ Staff supports these efforts, and also understands
5 that due to record outages in past years, specifically 2021 and 2023, the Company
6 has been given the opportunity to glean more insight on how to enhance the
7 Outage self-service experience, as well as the type and quality of information that
8 is being provided to customers during an outage.²

9 Going forward, Staff would like the Company to continue to focus on
10 the established metrics and improvements delineated in testimony: power
11 restoration accuracy and timeliness, first estimate accuracy, and outage
12 notification delivery.³ Staff would also like the Company to strive for
13 improvements as noted in an audit response, namely to improve estimate accuracy
14 and enhance outage status reporting capabilities, address emergent defects as a
15 result of the 2023 Advanced Distribution Management System (ADMS)
16 implementation, and to further enhance the Premise Power Status (PPS) outage
17 system. (Staff Exhibits S-18.1 & S-18.2.) The Company also stated that from the
18 2023 storms, it was determined that there needed to be improvements made to the
19 Outage Status and Reporting Dashboards, to improve the Company's visibility
20 into customers' outage experience, as well as enhancements to the Customer-
21 Facing Systems, including the Systems Enhancements Workstream, Customer

¹ Prefiled direct testimony of Company witness Michael Hatsios, p. 32.

² *Id.* at p. 30.

³ *Id.* at pp. 70-73.

1 Notifications Workstream, Customer Channels Workstream, and Police and Fire
2 Website. (Staff Exhibit S-18.3.) While staff supports these enhancements, it
3 recommends that the Company be required to demonstrate the results of these
4 investments in future rate cases.

5 Q. Does Staff have any other recommendations regarding the EFC or other outage
6 system projects?

7 A. Yes. Staff understands that storms are out of the Company's control and the
8 Company must try to react and respond to those storms and resulting outages as
9 best they can. Staff believes that the EFC is a worthy investment for the
10 Company to keep its customers informed during the stressful time of an outage.
11 With every storm and outage, the Company has the opportunity to learn and better
12 themselves in anticipation of the next storm. Staff recommends that the
13 Commission order the Company to describe, in detail, continuous improvements,
14 as well as any failures, experienced with the EFC and its various components
15 going forward. Staff would like to see the Company demonstrate specific goals it
16 expects to achieve in areas concerning Outage Status and Reporting Dashboards,
17 the Company's visibility into the customer's outage experience, and Customer-
18 Facing Systems, expected timelines for these goals, and ultimately, the execution
19 of goals, including the costs to achieve them. At a cost of \$50.0 million in total
20 capital from 2022-2025, the EFC is undeniably expensive, and Staff would like
21 continuous status updates, preferably in the form of biannual meetings with Staff,

1 as well as detailed updates in future rate cases, that this money is being well-
2 spent, for the betterment of customers.⁴

3 Q. Does this conclude your testimony?

4 A. Yes.

⁴ *Id.* at p. 68.

1 MR. ORRIS: Staff moves to bind in the
2 Direct Testimony of Danielle R. Rogers, consisting of a
3 cover sheet and 20 pages of qualifications, questions,
4 and answers. Ms. Rogers also sponsored the following
5 exhibits: S-15.1, S-15.2, S-15.3, S-15.4, S-15.5,
6 S-15.6, and S-15.7.

7 JUDGE WALLACE: Is there any objection to
8 binding in the testimony of Ms. Rogers?

9 Hearing none, that testimony is bound in.

10 Is there any objection to the admission
11 of Exhibits S-15.1 through S-15.7?

12 Hearing none, those exhibits are
13 admitted.

14 (Testimony bound in.)

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STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

✿ ✿ ✿ ✿

**In the matter of the application of
DTE ELECTRIC COMPANY
for authority to increase its rates, amend
its rate schedules and rules governing the
distribution and supply of electric energy, and
for miscellaneous accounting authority.**

Case No. U-21534

QUALIFICATIONS AND DIRECT TESTIMONY OF
DANIELLE R ROGERS
MICHIGAN PUBLIC SERVICE COMMISSION

1 Q. Please state your full name and business address for the record.

2 A. My name is Danielle R Rogers and my business address is 7109 W. Saginaw
3 Hwy., Lansing, MI 48917.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission (MPSC or
6 Commission) as a Departmental Analyst in the Data Access, Privacy, and IT
7 Section of the Customer Assistance Division.

8 Q. What is your professional background?

9 A. In 2010, I began working for the State Office of Administrative Hearings and
10 Rules as a Legal Secretary for the Administrative Law Judges (ALJs), presiding
11 over MPSC cases. My responsibilities included managing the ALJs' schedules, as
12 well as reviewing, editing, and processing legal documents, including proposals
13 for decision. In 2016, I became a Departmental Analyst in the Executive Secretary
14 Section of the MPSC. In that role, I analyzed electronic filings for public posting
15 and served as the subject matter expert in the development and deployment of the
16 current E-docket system. In 2019, I joined the Smart Grid Section which has since
17 been renamed the Data Access, Privacy, and IT Section. My responsibilities
18 include working on issues related to smart grid, data privacy tariffs, data
19 access/privacy/sharing, information technology (IT), contingency, and performing
20 analysis of requests by utility companies in rate case filings pertaining to the
21 issues stated above. Additionally, I co-led the Commission's MI Power Grid
22 Customer Education and Participation workgroup and supported many of the
23 other MI Power Grid activities in various workgroups, such as Energy Programs

1 and Technology Pilots, New Technologies and Business Models, Grid Security
2 and Reliability Standards, Electric Distribution Planning, and Integration of
3 Resource/Distribution/Transmission Planning.

4 Q. Have you received any additional training?

5 A. Yes. In February 2020, I attended the training program hosted by the Institute for
6 Public Utilities (IPU) at Michigan State University on Economic Regulatory
7 Policy. In May 2020, I attended the IPU Power Grid Course. I also attended the
8 Regulatory Training Initiative Rate Case Basics- How to Read and Analyze a
9 Rate Case training in March 2023. Additionally, I have actively participated in
10 various utility-related webinars and web conferences, covering topics such as
11 Advanced Meter Infrastructure (AMI), data security, data access and sharing,
12 smart grid deployment, distribution planning, and renewable energy integration
13 with the electric grid.

14 Q. Have you previously filed testimony before the Commission?

15 A. Yes, I have testified in the following cases:

- 16 - Case No. U-20650, Consumers Energy Company's gas rate case
- 17 - Case No. U-20697, Consumers Energy Company's electric rate case
- 18 - Case No. U-20836, DTE Electric Company's electric rate case
- 19 - Case No. U-20837, DTE Energy Company's revised AMI Opt Out Program case
- 20 - Case No. U-21297, DTE Electric Company's electric rate case
- 21 - Case No. U-21461, Indiana Michigan Power Company's electric rate case
- 22 - Case No. U-21291, DTE Gas Company's gas rate case

1 Q. Have you provided technical analysis or participated in a joint review in any other
2 cases before the MPSC?

3 A. Yes, I participated in a joint review and provided technical analysis in the
4 following cases:

- 5 - Case No. U-20134, Consumers Energy Company's electric rate case
- 6 - Case No. U-20162, DTE Electric Company's electric rate case
- 7 - Case No. U-20322, Consumers Energy Company's gas rate case
- 8 - Case No. U-20718, Michigan Gas Utilities Corporation's gas rate case
- 9 - Case No. U-21045, Alpena Power Company's electric rate case
- 10 - Case No. U-21097, Northern States Power Company's electric rate case

1 Q. What is the purpose of your testimony in this proceeding?

2 A. The purpose of my testimony is to present the Michigan Public Service
3 Commission Staff's (Staff) position regarding the reasonableness and prudence of
4 Information Technology (IT) project related expenses in this electric rate case.

5 Q. Are you sponsoring any exhibits?

6 A. Yes. The exhibits I am sponsoring are:

7 S-15.1: Staff's Recommended IT Adjustments

8 S-15.2: Projects with Level 2 Cost Estimates

9 S-15.3: DTE Electric Audit Responses

10 S-15.4: Comparison of Level 2 and Level 3 cost estimates

11 S-15.5: Projects with Level 3 Cost Estimates

12 S-15.6: Comparison of Level 3 Cost Estimates and Actual Costs

13 S-15.7: Digital Worker Experience EOL Recommended Adjustment

14 Q. Were these exhibits prepared by you or under your direction?

15 A. Yes

16 Q. What is DTE Electric's total IT expenditure request in this case?

17 A. DTE is requesting \$224.295 million for the 2022 historical year, \$314.591 million
18 for the bridge period (\$162.310 million in 2023 and \$152.281 million in 2024),
19 and \$145.653 million in the 2025 test year¹ for IT capital expenditures in this
20 case. The Company is also requesting \$82.251 million in IT O&M expenses.²

21 Q. What is Staff's position regarding the Company's IT expenditure requests?

¹ Company Exhibit A-12 Schedule B5.7 pg 1

² Company Exhibit A-13 Schedule C5.13

1 A. Staff recommends an IT expenditure disallowance of \$0.5 million in the 2022
2 historical year, \$36.197 million in the bridge period (\$12.258 million in 2023 and
3 \$23.939 million in 2024), and \$22.033 million in the 2025 test year. Staff also
4 recommends an IT O&M disallowance of \$5.644 million.³

5 Q. Is there a difference in the amounts which you are recommending as adjustments
6 to those which other Staff may have used in their testimony or exhibits for your
7 adjustments?

8 A. Yes, due to internal deadlines for Staff to finalize its calculated revenue
9 deficiency, Staff was unable to include its updated Digital Worker Experience
10 EOL project adjustment amount, which will be discussed below. The 2022
11 historical year, 2023 bridge year, 2025 test year, and O&M recommended
12 disallowances remain unchanged, however the revenue deficiency is calculated
13 using an adjustment of \$36.032 million in the bridge period. Staff's updated
14 recommended adjustment disallows an additional \$0.166 million in 2024. As a
15 result, Staff's 2024 adjustment changed from \$23.774 million to \$23.939 million,
16 for an updated total bridge period recommended adjustment of \$36.197 million.
17 The figure included in Exhibit S-15.1 contains the corrected recommended
18 adjustment for the Digital Worker Experience EOL project.

19 Q. What is Staff's recommended IT expenditure disallowance comprised of?

20 A. Staff's recommended IT disallowance can be categorized into 4 categories:
21 Projects with Level 2 cost estimates⁴, Projects with Level 3 cost estimates⁵,

³ Staff Exhibit S-15.1 Line 8

⁴ Staff Exhibit S-15.1 Line 6

⁵ Staff Exhibit S-15.1 Line 5

1 Individual IT projects⁶, and Unsupported O&M⁷. Staff will discuss each category
2 below.

3 **PROJECTS WITH LEVEL 2 COST ESTIMATES**

4 Q. What is Staff's recommendation regarding IT projects with Level 2 cost
5 estimates?

6 A. Staff recommends a 20% disallowance for 102 unique IT projects with a Level 2
7 cost estimate. This includes a capital expenditure disallowance of \$22.433 million
8 in 2024 and \$20.169 million in 2025, as well as an O&M disallowance of \$2.386
9 million.⁸

10 Q. Please explain Staff's recommendation of a 20% disallowance of costs for
11 projects with Level 2 cost estimates.

12 A. Staff recommends a 20% disallowance of costs related to IT projects with Level 2
13 cost estimates due to their incomplete, imprecise, and indefinite nature. According
14 to the Company's Annual Planning Cycle (APC) Cadence⁹, IT projects are given
15 a Level 2 cost estimate more than a year before they are ready for
16 implementation. Additional reviews, final approval, and budget allocation occur
17 after projects are given a Level 2 cost estimate. Many things can happen between
18 the time a project is given a Level 2 cost estimate and the year or more later at the
19 time of execution including a change in scope, a change in schedule, the quote
20 from the vendor, prioritization within the APC, or the necessity of the project

⁶ Staff Exhibit S-15.1 Line 4

⁷ Staff Exhibit S-15.1 Line 7

⁸ Staff Exhibit S-15.2 pg 2 Line 118

⁹ U-21297 Sharma 5Tr 1822 Figure 1

altogether. These examples show the uncertainty of the costs associated with IT projects with Level 2 cost estimates. It is unfair to pass such uncertain expenses onto ratepayers.

Additionally, through audit, the Company provided U-21534 DR-1 1 Level 2&3 Cost Estimates, a spreadsheet showing IT projects with their Level 2 cost estimate from DTE Electric's previous rate case, Case Number U-21297, and their, theoretically more accurate, Level 3 cost estimate in the instant case.¹⁰ Analyzing the Company's spreadsheet, Staff calculated the percent difference of the Level 2 and Level 3 project costs to range from -99.86% to 277.36% and found that of the 142 listed projects, only 24 projects had no change in cost. The Company over recovered costs on 75 of the projects, and the Company under recovered costs on 43 of the projects.¹¹ Evaluating the 75 projects in which the Company over recovered from, the percent difference ranged from 0.11% to 99.86% with an average of 31.45% over-recovery.¹² Evaluating the 43 projects in which the Company under recovered from, the percent difference ranged from 0.10% to 277.36% with an average of 37.28% under recovery.¹³ Staff finds the significant percent cost differences between Level 2 and Level 3 cost estimates to be concerning. This speaks to the inaccuracy of Level 2 cost estimates and the inadequacy of DTE's cost estimation practices when it comes to including these projected costs in rates. The Company chooses to file a projected test year in its

¹⁰ Staff Exhibit S-15.3 pg 1

¹¹ Staff Exhibit S-15.4 pgs 1-3

¹² Staff Exhibit S-15.4 pgs 4-5

¹³ Staff Exhibit S-15.4 pg 6

1 rate case application. As projected, the Company is able to over recover costs for
 2 these IT projects for known projected costs. Axiomatically, the Commission is
 3 unable to perform retroactive ratemaking to correct for this issue if costs are
 4 projected at too high of a level. It is unfair to pass such uncertain and imprecise
 5 costs onto ratepayers. If the Company spends more than 80% of the requested
 6 cost, they can always seek recovery in the next rate case.

7 Q. How did Staff arrive at a 20% recommended disallowance for projects with Level
 8 2 cost estimates?

9 A. Staff used the Association for the Advancement of Cost Engineering (AACE)
 10 International Recommended Practice Cost Estimation Classification¹⁴ and the
 11 information provided for the basis of Level 2 cost estimations to establish a class
 12 of estimate. As indicated by the Company in Case Number U-20836¹⁵ and
 13 unchanged in the instant case, Level 2 cost estimates are based on labor hours,
 14 hardware costs, and software costs, but do not have a defined scope. Staff finds
 15 this level of cost information best applies to the AACE Class 3 estimate, with
 16 semi-detailed unit costs. AACE Class 3 estimates have a lower bound of
 17 -20%, meaning the actual cost could be as much as 20% less than the estimate.
 18 Subsequently, Staff chose a 20% adjustment to reflect the amount that the
 19 Company could over-recover from Level 2 project cost estimates. Based on
 20 Staff's analysis above, 20% is a conservative adjustment as the average percent of

¹⁴ AACE International Recommended Practice No 18R-97, Cost Estimation Classification System - As Applied in Engineering, Procurement, and Construction for the Processing Industries, Staff.

https://web.aacei.org/docs/default-source/toc/toc_18r-97.pdf?sfvrsn=4

¹⁵ U-20836 Sharma 7Tr 1928

1 over projection between Level 2 and Level 3 cost estimates is actually greater
2 than 30%. Given these findings, the level of over recovery between a Level 2 cost
3 estimate and the actual cost is likely greater than 30%.

4 Q. Has Staff taken this position in previous DTE rate cases?

5 A. Yes, Staff recommended a 20% disallowance of costs related to IT projects with
6 Level 2 cost estimates in DTE's last two decided electric rate cases, Case Nos. U-
7 20836 and U-21297, as well as DTE's current gas rate case, Case No. U-21291.

8 Q. How did the Commission rule on IT investments with Level 2 cost estimates in
9 prior rate cases?

10 A. In Case No. U-20836, the Commission approved a 20% disallowance of costs
11 related to business cases with Level 2 cost estimates and stated, "The cost
12 variances pointed out by the Staff and the ALJ are telling. Regardless of whether
13 costs are for projects that are similar to earlier projects, it is still necessary to have
14 a clear understanding of the timing of the project and a level of detail regarding
15 the costs that demonstrates that the costs are reasonable and prudent—without
16 that, the costs cannot be properly evaluated by the Commission for inclusion in
17 rate base and the projections are incomplete. The Commission also finds it
18 appropriate that the Staff recommends adjustments to individual projects rather
19 than to a budget as a whole. That is the only way to determine whether a project
20 presents benefits to ratepayers. The Commission's determination of
21 reasonableness and prudence (and its obligation to protect ratepayers) involves

1 more than the simple hope that the over- and under-projections balance one
2 another out. MCL 460.6; MCL 460.6a.”¹⁶

3 The Commission also approved a 20% disallowance of costs associated with IT
4 projects with Level 2 cost estimates in Case Number U-21297 and stated, “The
5 Commission further agrees with the Staff that “Level 2 cost estimates are
6 incomplete and indefinite in nature.”” It added, “The Commission also finds
7 persuasive the Staff’s rationale for using the AACE Class 3 Estimate to derive its
8 20% disallowance here, and as acknowledged by the Staff, “[i]f the Company
9 spends more than 80% of the projected cost, it can include the updated
10 information in the next electric rate case to be reviewed for reasonableness and
11 prudence.””¹⁷

12 The Commission has not yet ruled on Staff’s recommended 20% disallowance in
13 DTE’s current gas rate case, Case No. U-21291.

14 **PROJECTS WITH LEVEL 3 COST ESTIMATES**

15 Q. What is Staff’s recommendation regarding IT projects with Level 3 cost
16 estimates?

17 A. Staff recommends a 10% disallowance for 104 unique IT projects with a Level 3
18 cost estimate. This includes a capital disallowance of \$11.861 million in the
19 bridge period (\$11.315 million in 2023 and \$0.546 million in 2024), and \$0.823

¹⁶*In re application of DTE Electric Company electric rate case*, MPSC Case No. U-20836, 11/18/2022 Order, p. 192.

¹⁷*In re application of DTE Electric Company electric rate case*, MPSC Case No. U-21297, 12/01/2023 Order, p. 147.

1 million in the 2025 test year, as well as an O&M disallowance of \$0.084
 2 million.¹⁸

3 Q. Please explain Staff's recommendation of a 10% disallowance of costs for
 4 projects with Level 3 cost estimates.

5 A. Staff recommends a 10% disallowance to IT projects with a Level 3 cost estimate
 6 due to their inaccurate nature. Using a spreadsheet of IT projects with Level 3
 7 cost estimates provided through audit in Case Number U-21297, Staff compared
 8 the then Level 3 cost estimate with the actual cost in the instant case. Of the 125
 9 projects listed (Staff removed 2 lines of the Oracle Forecasting Tool project as the
 10 Commission approved the disallowance of the investment in its December 1, 2023
 11 Order)¹⁹, 121 of the projects had a spend year of 2022. The remaining 4 projects
 12 had a spend year of 2023. Analyzing the costs, Staff found that the percent
 13 difference of the costs ranged from -100% to 1269%.²⁰ The Company over
 14 recovered on 70 of the 125 projects with an average percent over recovery of
 15 38.31%.²¹ The Company under recovered on 55 of the 125 projects with an
 16 average percent under recovery of 86.31%.²² Three of the projects had an under
 17 recovery of over 500%. These are Production Growth (547.66%), Ransomware
 18 Protection (625.14%), and End of Life Asset Replacements (1269%). Without
 19 these three projects, the average percent under recovery decreases to 44.34%.

¹⁸ Staff Exhibit S-15.5 pg 3 Line 120

¹⁹ *In re application of DTE Electric Company electric rate case*, MPSC Case No. U-21297, 12/01/2023 Order, p. 148.

²⁰ Staff Exhibit S-15.6 pgs 1-3

²¹ Staff Exhibit S-15.6 pgs 4-5

²² Staff Exhibit S-15.6 pgs 6-7

Staff once again finds these cost variances to be concerning. According to the Company, Level 3 cost estimates are the most accurate cost estimate prior to actual costs; however, Staff's analysis demonstrates a significant discrepancy. The cost variance between Level 3 cost estimates and actual costs are not much more improved than the cost variance between Level 2 cost estimates and Level 3 cost estimates. Once again Staff emphasizes that the Company chooses to file a projected test year in its rate case application and has an obligation to make accurate expense requests. As projected, the Company may over recover costs for these IT projects, but the Commission is unable to perform retroactive ratemaking to correct for this issue. It is unfair to pass costs onto ratepayers without the assurance that its entirety will be used for the intended reasonable and prudent investment. If the Company spends more than 90% of the requested cost, they can always seek recovery in the next rate case.

Q. How did Staff arrive at a 10% recommended disallowance for projects with Level 3 cost estimates?

A. Staff used the Association for the Advancement of Cost Engineering (AACE) International Recommended Practice Cost Estimation Classification²³ and the information provided for the basis of Level 3 cost estimations to establish a class of estimate. As indicated by the Company in Case Number U-20836²⁴ and unchanged in the instant case, a Level 2 project transitions to a Level 3 project

²³ AACE International Recommended Practice No 18R-97, Cost Estimation Classification System - As Applied in Engineering, Procurement, and Construction for the Processing Industries, Staff.
https://web.aacei.org/docs/default-source/toc/toc_18r-97.pdf?sfvrsn=4

²⁴ U-20836 Sharma 7Tr 1928

1 when the project is approved for project execution and the scope, cost, and
2 schedule are managed. Staff finds this level of cost information best applies to the
3 AACE Class 1 estimate, with more detailed costs. AACE Class 1 estimates have a
4 lower bound of -10%, meaning the actual cost could be as much as 10% less than
5 the estimate. Subsequently, Staff chose a 10% adjustment to reflect the amount
6 that the Company could over-recover from Level 3 project cost estimates.
7 Subsequent to Staff's analysis above, 10% is a generous adjustment as the
8 average percent over recovery exceeds 30%.

9 Q. Has Staff taken this position in previous DTE rate cases?

10 A. Staff has not supported an adjustment for projects with Level 3 cost estimates in
11 previous DTE rate cases, however Staff continues to be troubled by the
12 Company's imprecise cost estimation practices when it comes to setting rates.
13 What was stated to be the most precise cost estimation prior to actual cost is in
14 fact not precise at all. Level 3 cost estimates should be very comparable to actual
15 costs. Directly preceding execution is when the scope and schedule should be
16 defined, the vendor should be chosen, and a contract should be in place. The
17 percent cost difference between Level 3 cost estimates and actual costs shows
18 otherwise.

19 **DIGITAL WORKER EXPERIENCE EOL**

20 Q. What is the Digital Worker Experience EOL project?

21 A. The Digital Worker Experience EOL investment is DTE's support, issuance, and
22 maintenance of the Company's 14,000 endpoint devices including desktop
23 computers, laptops, tablets, smart devices, and ruggedized field computers. In

1 testimony, DTE states that it replaces 20% of the devices annually to maintain the
2 asset refresh rate of 95% devices greater than 5 years old. It also adds 25 units
3 each year for new hires and replaces 100 units each year that were damaged or
4 destroyed from normal use. Additionally, due to more prevalent remote work, the
5 Company replaces desktop towers with laptops.²⁵

6 Q. What is DTE projecting for the Digital Worker Experience EOL investment?

7 A. The Company is requesting \$7.90 million in the 2022 historical year, \$5.672
8 million in the bridge period (\$3.022 million in 2023 and \$2.650 million in 2024),
9 and \$2.650 in the 2025 test year for the Digital Worker Experience EOL project.²⁶

10 Q. What is Staff's recommendation regarding the Digital Worker Experience EOL
11 project?

12 A. Staff recommends a disallowance of \$1.903 million in the bridge period (\$0.943
13 million in 2023 and \$0.960 million in 2024), and \$1.041 million in the 2025 test
14 year for the Digital Worker Experience EOL project.²⁷

15 Q. Is there a difference in the amounts which you are recommending as adjustments
16 to those which other Staff may have used in their testimony or exhibits for your
17 adjustments?

18 A. Yes, as stated above, Staff's calculated revenue deficiency reflects a
19 recommended disallowance of \$1.738 million in the bridge period (\$0.943 million
20 in 2023 and \$0.795 million in 2024). However, the figure included in Exhibit S-
21 15.1 is the corrected recommended adjustment for the Digital Worker Experience

²⁵ Testimony of Company witness P. Sharma pg 111

²⁶ Company Exhibit A-12 Schedule B5.7.7 Line 18

²⁷ Staff Exhibit S-15.1 Line 1

1 EOL project. The recommended 2023 bridge year and 2025 test year
2 disallowances remain unchanged, but Staff's updated recommended adjustment
3 disallows an additional \$0.166 million in 2024. As a result, Staff's 2024
4 adjustment changed from \$0.795 million to \$0.960 million, for an updated total
5 bridge period recommended adjustment of \$1.903 million.

6 Q. Please explain Staff's position.

7 A. Staff's recommended adjustment is due to the Company's lack of support for the
8 full requested expense. In testimony, DTE provided Table 2, Endpoint Devices
9 Replaced by Year. This table supports the total number of laptops, desktops,
10 monitors, and tablets replaced in 2023, 2024, and 2025.²⁸ Through audit, Staff
11 requested the cost of each individual laptop, desktop, monitor, and tablet. The
12 Company responded with the following prices: laptop kits- \$1655, desktops-
13 \$1105, monitors- \$165, and tablets- \$795.²⁹ Using the number of devices replaced
14 from Table 2 and adding 125 units (at the most expensive cost) for new hires and
15 replacements, Staff calculated the total cost of the devices from the information
16 provided and the difference from the requested expense.³⁰ The Company states
17 that in 2023, devices were deployed to support ADMS, primarily in vehicles,
18 requiring additional docks, cabling harnesses, and installation, at a cost of \$0.8
19 million.³¹ Removing that expense from the \$1.743 million difference in 2023
20 calculates to an expense difference of \$0.943 million.

²⁸ Testimony of Company witness Sharma pg 111

²⁹ Staff Exhibit S-15.3 pg 2

³⁰ Staff Exhibit S-15.7

³¹ Company Exhibit A-24 Schedule N3 Line 305

1 Staff's Total Recommended Adjustment for each year is the amount that is
2 unaccounted for. The Company failed to provide evidence in support of these
3 remaining costs for the Digital Worker Experience EOL. Staff finds it unfair to
4 pass unsupported, unjustified, and unaccounted for expenses onto ratepayers.

5 **END OF LIFE ASSET REPLACEMENTS**

6 Q. What is the End of Life Asset Replacements project?

7 A. The End of Life Asset Replacements project replaces servers, storage, databases,
8 and operating licenses that are at the end of their serviceable life. These assets
9 cannot accept operating system or security vulnerability remediation, have
10 reached their threshold of processing ability, or the technology no longer interacts
11 with newer components within the architecture.³²

12 Q. What is DTE requesting for the End of Life Asset Replacements project?

13 A. The Company is requesting \$6.845 million in the 2022 historical year, \$0.971
14 million in the bridge period (\$0.471 million in 2023 and \$0.5 million in 2024),
15 and \$0.5 million in the 2025 test year for the End of Life Asset Replacements
16 project.³³

17 Q. What is Staff's recommendation regarding the End of Life Asset Replacements
18 project?

19 A. Staff recommends a \$0.5 million disallowance in the 2022 historical year for the
20 End of Life Asset Replacements project.³⁴

21 Q. Please explain Staff's position.

³² Testimony of Company witness Sharma pg 112 Lines 6-10

³³ Company Exhibit A-12 Schedule B5.7.7 Line 19

³⁴ Staff Exhibit S-15.1 Line 2

1 A. In testimony, Company witness Sharma states that the End of Life Asset
2 Replacements project had a variance of \$6.5 million more in the 36 months
3 ending December 31, 2024, than was approved for cost recovery in U-21297, and
4 \$6.1 million of that variance was due to the purchase of a 3 year license purchase
5 of VMWare in 2022.³⁵ Company testimony also includes a 2025 capital
6 expenditure request for the renewal of the VMWare 3 year license as its own
7 project at a cost of \$5.6 million.³⁶ The Company does not provide any explanation
8 as to the difference in cost between 2022 and 2025 for the 3 year license
9 purchases. Without more information, Staff finds it unnecessary to pass the full
10 \$6.1 million onto ratepayers when three years later, the cost is \$0.5 million less.
11 For this reason, Staff recommends a \$0.5 million disallowance in the historical
12 year for the End of Life Asset Replacements investment.

13 **O&M PROJECT COST TO ACHIEVE**

14 Q. How has DTE broken down its IT O&M costs?

15 A. DTE has broken down its IT O&M costs into five categories. The five categories
16 include Base Operate, License Management & Maintenance, Project Cost to
17 Achieve, Other-Dell Finance Lease, and A&G Capitalized. Company testimony
18 further explains these categories. Base Operate includes the operational labor
19 support. License Management & Maintenance is the software maintenance cost.
20 Project Cost to Achieve is the O&M costs attributed to each capital investment in

³⁵ Testimony of Company witness Sharma pg 112 Lines 16-19

³⁶ Testimony of Company witness Sharma pg 107 Lines 15-17

1 Company Exhibit A-24 Schedule N-3. And A&G Capitalized is the transfer of
2 A&G costs to capital as an overhead.³⁷

3 Q. What is DTE requesting for O&M Project Cost to Achieve?

4 A. The Company is projecting a Project Cost to Achieve expense of \$21.369
5 million.³⁸

6 Q. What is Staff's recommendation regarding the Project Cost to Achieve O&M
7 category?

8 A. Staff recommends a disallowance of \$3.174 million for the Project Cost to
9 Achieve O&M category.³⁹

10 Q. Please explain Staff's position.

11 A. Staff recommends a \$3.174 million disallowance in the Project Cost to Achieve
12 O&M category because it is the amount that is unsupported by the Company. In
13 Exhibit A-24 Schedule N-3, Column Y, the Company provided the projected
14 O&M for each investment. Staff added the projected O&M for all projects listed
15 for a total of \$18.195 million. This leaves \$3.174 million unsupported and
16 unaccounted for. In testimony, Company witness Sharma states that, "The O&M
17 costs reflected in Exhibit A-24 Schedule N-3 represent the total O&M cost to
18 achieve each project and are provided for informational purposes only."⁴⁰
19 Company witness Uzenski further testifies that IT O&M is forecasted based on
20 historical costs plus inflation. O&M related to capital projects is only a portion of

³⁷ Testimony of Company witness Sharma pg 9 Lines 19-20 and pg 10 Line 1

³⁸ Company Exhibit A-13 Schedule C5.13 Line 5

³⁹ Staff Exhibit S-15.1 Line 7

⁴⁰ Testimony of Company witness Sharma pg 9 Line 20 and pg 10 Lines 1-2

1 the total IT O&M costs and consequent to the method of expense forecasting,
2 specific costs are not included in the O&M projections. As work related to
3 historical projects is done, it is replaced with work on new projects.⁴¹
4 Staff believes that all costs requested by the Company for inclusion in rates
5 should be supported with evidence in testimony and exhibits to show they are
6 reasonable and prudent. Replacing historical project work with new project work
7 does not assure the expenses are used or usefully used. The remaining \$3.174
8 million in the Project Cost to Achieve category is arbitrary and not connected to
9 any project or investment. Staff believes it is unfair to pass a cost onto ratepayers
10 that is unsupported, and unjustified, and without a known purpose.

11 Q. Please summarize Staff's recommended IT adjustments supported in this
12 testimony.

13 A. **Projects with Level 2 Cost Estimates**

- 14 - \$22.433 million in the 2024 bridge year
- 15 - \$20.169 million in the 2025 test year
- 16 - \$2.386 million in O&M

17 **Projects with Level 3 Cost Estimates**

- 18 - \$11.861 million in the bridge period (\$11.315 million in 2023 and \$0.546
19 million in 2024)
- 20 - \$0.823 million in the 2025 test year
- 21 - \$0.084 million in O&M

⁴¹ Testimony of Company witness Uzenski pg 56 Lines 2-5

1 **Digital Worker Experience EOL project**

2 - \$1.903 million in the bridge period (\$0.943 million in 2023 and \$0.960 million
3 in 2024)

4 - \$1.041 million in the 2025 test year

5 **End of Life Asset Replacements**

6 - \$0.5 million in the 2022 historical year

7 **Project Cost to Achieve**

8 - \$3.174 million in O&M

9 Q. Does this conclude your testimony?

10 A. Yes.

1 MR. ORRIS: Staff moves to bind in the
2 Direct Testimony of Ryan Boutet, consisting of a cover
3 sheet and ten pages of qualifications, questions, and
4 answers, noting that his testimony begins on the page
5 marked 2. Mr. Boutet also sponsored the following
6 exhibits: S-12.1, S-12.2, S-12.3, S-12.4, S-12.5,
7 S-12.6, and S-12.7.

8 JUDGE WALLACE: Thank you, Mr. Orris. Is
9 there any objection to binding in the testimony of
10 Mr. Boutet?

11 Hearing none, the testimony is bound in.

12 Is there any objection to the admission
13 of Exhibits S-12.1 through S-12.7?

14 As noted -- well, it's going to be, have
15 the transcript number, but his direct testimony begins on
16 page 2, as noted by Mr. Orris.

17 (Testimony bound in.)

18 - - -

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the application of	)	
DTE ELECTRIC COMPANY	)	
for authority to increase its rates, amend	)	Case No. U-21534
its rate schedules and rules governing the	)	
distribution and supply of electric energy,	)	
<u>and for miscellaneous accounting authority.</u>	)	

QUALIFICATIONS AND DIRECT TESTIMONY OF
RYAN BOUTET
MICHIGAN PUBLIC SERVICE COMMISSION

July 26, 2024

1 Q. Please state your full name and business address for the record.

2 A. My name is Ryan Boutet (he/him/his), and my business address is 7109 West Saginaw
3 Highway, Lansing, Michigan 48917.

4
5 Q. By whom are you employed and in what capacity?

6 A. I am employed by the Michigan Public Service Commission (MPSC or Commission) as a
7 Public Utilities Engineer in the Electric Operations Section of the Energy Operations
8 Division.

9
10 Q. Please describe your educational background.

11 A. I earned a Bachelor of Science in Mechanical Engineering from Michigan State University
12 in December of 2019, as well as additional minors in Computer Science & Engineering,
13 and German from Michigan State University.

14
15 Q. What is your professional background?

16 A. During my time at Michigan State University I focused my electives on the energy sector
17 and renewable technologies, allowing me to spend a summer abroad on a research program
18 at RWTH Aachen University in Germany in the Summer of 2016, a top technical institute
19 in Europe. There, I conducted comparative research on wind energy conversion rates for
20 various horizontal and vertical-axis turbine configurations, as well as aspects such as
21 economic factors, payback periods, material and construction costs, estimated energy
22 production, and more. Following this, and still during my education at Michigan State
23 University, I took a part-time position with a drone company known as Vision Air Systems,

1 where I worked as a Drone Data Analyst. Vision Air Systems provided drone services
2 primarily focused on visual inspections in construction zones and other hard-to-access
3 industrial areas. My responsibilities included creating and verifying flight paths for drones
4 used in visual inspections, communicating needs between drone operators and clients, and
5 working with drone operators to ensure data and flight paths are properly databased and
6 made available to clients. I remained with Vision Air Systems until late 2018 when
7 business heavily declined due to oversaturation and heavy competition in the Drone
8 Services industry. Post graduation, in 2020, during the height of the pandemic, I took a
9 position as a Delivery Associate for Amazon, under a contracting company known as DEK
10 Delivery LLC, where I remained until joining the MPSC in October of 2023. As a Public
11 Utilities Engineer in the Electric Operations Section of the MPSC, my responsibilities
12 include reviewing electric rate cases, handling customer complaints and safety concerns,
13 and contributing to multiple other efforts to ensure the electrical grid in Michigan stays
14 reliable and safe. Some such examples include projects focused on the needs of critical
15 facilities such as hospitals and nursing homes, projects on defining and supporting grid
16 resilience, and projects focused on performance metrics and incentivized performance for
17 utility companies.

18
19 Q. Have you received any work-related training since starting your employment with the
20 MPSC?

21 A. Yes. The trainings I have completed so far include:

- 22 • OSMOSE: Contact Voltage is Unseen and Unforgiving
- 23 • MPSC Rate Case Training Series

- Regulatory Training Initiative: Performance Based Ratemaking for Energy Utilities (2023)
- NARUC/NASEO: Distribution System Planning & Resilience Planning Training
- Regulatory Assistance Project: Improving Utility Performance Incentives
- Regulatory Training Initiative: Rate Case Basics (2024)
- Energy Utility Consultants Inc.: Right of Way Management (2024)
- Regulatory Training Initiative: The Basics of Utility Accounting & Ratemaking (2024)

Q. Have you previously testified before the Commission?

A. Yes. I have filed in the following cases:

<u>Case No</u>	<u>Company</u>	<u>Type of Case</u>	<u>Subject of Testimony</u>
U-21461	I&M Power	Electric Rate	Storm Expenses & Restoration, Tree Trim
U-21555	UPPCO	Electric Rate	Fleet & Facility Expenses

1 Q. What is the purpose of your testimony in this proceeding?

2 A. The purpose of my testimony is to provide the Michigan Public Service Commission
3 Staff's (Staff) insights and recommendations on the topics of Vehicle Fleet and
4 Maintenance, and Base Capital Programs.

5
6 Q. Are you sponsoring any exhibits?

7 A. Yes, I am sponsoring five exhibits:

<u>Exhibit No.</u>	<u>Description</u>
Exhibit S-12.1	DTE Response to Staff Discovery Questions Topic: Fleet Capital Purchases
Exhibit S-12.2	DTE Response to Staff Discovery Questions Topic: Fleet Repair Expenses
Exhibit S-12.3	DTE Response to Staff Discovery Questions Topic: Fleet Service Providers
Exhibit S-12.4	DTE Response to Staff Discovery Questions Topic: Base Capitals Program – Actual 2023 Expenses
Exhibit S-12.5	DTE Response to Staff Discovery Questions Topic: Summary of Relocations Projects
Exhibit S-12.6	DTE Response to Staff Discovery Questions Topic: Fleet Capital – Actual 2023 Expenses
Exhibit S-12.7	DTE Response to Staff Discovery Questions Topic: Fleet Capital – Actual 2024 Expenses

Vehicle Fleet Capital Expenses

Q. Please provide an overview of the Company's Vehicle Fleet Capital Expenses.

A. Company witness Uzenski supports the Company's proposed expenses for Vehicle Fleet Capital expenditures in her direct testimony. In summary, this category includes expenses such as cars, trucks, bucket trucks, trailers, and forklifts that are purchased to replace aging fleet assets and maintain a safe and reliable fleet. DTE uses a proprietary model to track asset lifecycles and optimize total costs of ownership. As seen on Company Exhibit A-12 Schedule B5.8, The Company projected 2023 calendar year capital expenditures of \$32.79 million, 2024 calendar year capital expenditures of \$38.24 million, and 2025 test year capital expenditures of \$42.6 million, all following a historic spend of \$43.82 million in 2022. The Company provided greater insight during discovery, providing a spreadsheet showing all planned fleet purchases for the above timelines, summarized in Staff Exhibit S-12.1. Actual 2023 expenditures for new fleet purchases came out to approximately \$29.35 million spread across approximately 570 fleet purchases. Calendar year 2024 actuals come in at \$4.94 million between January 1, 2024, and April 30, 2024, while projections for the rest of 2024 are approximately \$30.45 million for a projected total of \$35.4 million in new fleet purchases spread across approximately 360 fleet purchases for 2024. Staff notes that the Company over projected their 2023 costs by approximately \$3.5 million and is on track for a similar over projection of approximately \$3 million in 2024. Projected purchases for the test period, calendar year 2025, sit at a total of \$42.595 million spread across approximately 260 fleet purchases.

1 Q. Does Staff have any recommendations concerning the Company's Vehicle Fleet Capital
2 Expenses?

3 A. Yes. Staff is recommending a disallowance of \$2.84 million for the bridge period and a
4 disallowance of \$3.83 million for the test year. This adjustment is based on historical
5 underspending in 2023 in this category as well as evidence that the Company is again on
6 track to underspend in 2024. Staff Exhibit S-12.6 showcases that actual 2023 expenditures
7 came in \$3.44 million under the Company projections, an approximate underspend of
8 10.5%. Discovery responses seen in Staff Exhibit S-12.7 show that 2024 expenditures are
9 on track to come in \$2.84 million under the Company projections, an approximate
10 underspend of 7.5%. Staff is recommending that this \$2.84 million be disallowed from the
11 bridge period. Further, Staff is recommending that \$3.83 million be disallowed from the
12 test year, based on averaging the underspend from 2023 and 2024 to arrive at a 9%
13 disallowance for 2025.

14
15 Q. Do you have any additional information to add regarding your adjustment?

16 A. Yes. Regarding my recommendation for the above adjustment, it should be noted that my
17 analysis concluded after internal deadlines finalizing Staff's revenue deficiency. The
18 impacts of this adjustment are not reflected in the testimony and exhibits of other Staff
19 witnesses or in the Staff's revenue deficiency supported by Staff witness Nichols. All
20 impacts of this adjustment will be included in Staff's Brief.

21
22
23 **Vehicle Fleet Operations & Maintenance Expenses**

1 Q. Please provide an overview of the Company's Vehicle Fleet Operations & Maintenance
2 Expenses.

3 A. The Company tracks O&M for fleet vehicles in two categories, capital repair work and
4 O&M work. Capital repair work includes engine and transmission repairs, body work, and
5 any other large, unexpected expenses. O&M work consists of routine and predictable
6 maintenance, including oil changes, tire rotations, brake replacements, and fluid refills.
7

8 Q. Please provide more detail on the Company's Vehicle Fleet Capital Repair expense trends.

9 A. Both historic actual and projected future costs for capital repair work done to Fleet Vehicles
10 from 2020 to 2025 are provided in Staff Exhibit S-12.2. The spike in capital repair expenses
11 around 2022 were related to supply chain issues and the chip shortage during the COVID-
12 19 pandemic, which resulted in the Company spending more on capital repairs for older
13 vehicles, as new ones were not readily available.
14

15 Q. Please provide more detail on the Company's Vehicle Fleet O&M work expense trends.

16 A. Both historic actual and projected future costs for O&M work done to Fleet Vehicles from
17 2020 to 2025 are provided in Staff Exhibit S-12.2. The dip in O&M work spending around
18 2022 was related to the supply chain issues and the chip shortage during the COVID-19
19 pandemic, which resulted in the Company spending less on O&M work as its fleet was
20 aging and requiring a greater portion of capital repair work.
21

22 Q. Who services Company owned fleet vehicles?

1 A. Revealed in discovery, seen in Staff Exhibit S-12.3, the Company states it has 92% of
2 O&M related work done in-house by DTE mechanics, while 91% of capital repair related
3 work is done in-house by DTE mechanics. The Company typically only outsources work
4 related to insurance claims, warranty claims, or heavy-duty suspension, transmission, or
5 engine work.

6
7 Q. Does Staff have any recommendations concerning the Company's Vehicle Fleet
8 Operations & Maintenance expenses or procedures?

9 A. Staff does not have any suggestions currently.

10
11 **Base Capital Programs**

12 Q. Please provide an overview of the Company's Base Capital Program.

13 A. The Base Capital Program concerns itself with several broad categories such as emergent
14 equipment replacements, customer connections, relocations, new load connections, public
15 lighting, and other general tools and equipment necessary for this work. The breakdown
16 for this category can be seen on lines 1-17 on page 1 of Company Exhibit A-12 Schedule
17 B5.4

18
19 Q. Are there any spending trends of note in the Base Capital Programs category?

20 A. Generally speaking, the total cost of the Base Capital Program only increases by
21 approximately 3% from the historic 2022 year to the projected 2025 test year. However,
22 the same cannot be said for all sub-programs in this category. Notably, the 'Relocations'
23 sub-program costs doubles from 2022 to 2023 and continues growing into 2024. Relocation

1 projects are often tied to requests by other city, state, or government agencies that involve
2 public infrastructure. It is noted that the number of these projects has been increasing in
3 recent years due to recent influxes in infrastructure spending at both the state and federal
4 levels.

5
6 Q. Please provide greater detail on the 'Relocations' sub-program and its spending trends.

7 A. Despite the trends listed above and seen in the Company Exhibits filed with this rate case,
8 DTE was able to show that actual spending for 2023 in this category came in well below
9 forecast. Revealed in discovery, now seen in Staff Exhibit S-12.4, DTE spent only \$38.08
10 million of the \$45.77 million projected for 2023. Further, it is worth noting that the
11 Company revealed in discovery that most relocation requests do indeed come at the behest
12 of government agencies. Staff Exhibit S-12.5 shows that for calendar year 2023, of the
13 \$38.08 million spent, \$24.65 million was for "Relocation Projects (excl. Major
14 Infrastructure)" and \$20.34 million of that was at the request of city, state, or county
15 agencies.

16
17 Q. Does Staff have any recommendations concerning the Company's Base Capital Programs?

18 A. Staff does not have any suggestions currently.

19
20 **Summary**

21 Q. Please summarize your recommendations.

- 1 A. 1. Staff recommends a disallowance of \$2.84 million for the bridge period in the category
2 Vehicle Fleet Capital Expenditures. Staff Further recommends a disallowance of \$3.83
3 million for the test year in the category Vehicle Fleet Capital Expenditures.
4 2. Staff currently has no recommendations on the topic of Vehicle Fleet Operations &
5 Maintenance Expenses.
6 3. Staff currently has no recommendations on the topic of Base Capital Programs.
7
8 Q. Does this conclude your testimony?
9 A. Yes.

1 MR. ORRIS: Staff moves to bind in the
2 Direct Testimony of Jessica A. --

3 JUDGE WALLACE: Hold on one second. Did
4 I admit Exhibits S-12.1 through S-12.7?

5 MR. ORRIS: I thought you, yes.

6 JUDGE WALLACE: I did. All right. Then
7 move right along. Sorry about that.

8 MR. ORRIS: O.K. Staff moves to bind in
9 the Direct Testimony of Jessica A. Duell, consisting of a
10 cover sheet and ten pages of qualifications, questions,
11 and answers, noting that her testimony does begin on page
12 marked 2. Ms. Duell sponsored no exhibits.

13 JUDGE WALLACE: Is there any objection to
14 binding in the testimony of Ms. Duell?

15 Hearing none, the testimony is bound in.

16 (Testimony bound in.)

17 - - -

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STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the application of	)	
DTE ELECTRIC COMPANY	)	
for authority to increase its rates, amend	)	Case No. U-21534
its rate schedules and rules governing the	)	
distribution and supply of electric energy,	)	
<u>and for miscellaneous accounting authority.</u>	)	

QUALIFICATIONS AND DIRECT TESTIMONY OF
JESSICA DUELL
MICHIGAN PUBLIC SERVICE COMMISSION

July 26, 2024

1 Q. Please state your full name and business address for the record.

2 A. My name is Jessica Duell (she/her/hers), and my business address is 7109 West Saginaw
3 Highway, Lansing, Michigan 48917.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission (MPSC or Commission) as a
6 Public Utilities Departmental Analyst in the Electric Operations Section of the Energy
7 Operations Division.

8 Q. Please describe your educational background.

9 A. I earned a Bachelor of Liberal Arts with a major in Biology and minor in psychology at
10 Olivet College in 2015.

11 Q. What is your professional background?

12 A. In 2015 I worked as a certified nurse assistant (CNA) at Green Acres of Ionia in Ionia,
13 Michigan. As a CNA, I would take care of patients with their daily needs. In 2016, I
14 started working for State of Michigan Department of Health and Human Services
15 (MDHHS) at the Hawthorn Center as a Childcare Worker. My responsibilities were to
16 watch over the children and take care of them while they stayed at the hospital. I worked
17 at the Hawthorn Center until January of 2018 when I then transferred to become an
18 Eligibility Specialist for MDHHS. I worked as an Eligibility Specialist from 2017-2022.
19 As an eligibility specialist I had to work with policy and procedures to determine each
20 client's eligibility for state benefits. I would process applications, conduct reviews,
21 interview clients, speak to clients on the phone, and process verifications received to
22 determine eligibility for each program. As an eligibility specialist I would contact utility
23 companies when a client's utilities were turned off or in shut-off status. I would

1 communicate with the utilities to figure out how much the client owed and to determine
2 what I could do to get the client's utility service turned back on or not shut off, depending
3 on the circumstances. Clients would submit an SER (State Emergency Relief) application
4 and I would then have to process the application to prevent a shut off of their utilities. I
5 also worked as a mentor for new workers. My responsibilities as a mentor were to train
6 new workers in every aspect of the job and make sure they could complete the job
7 precisely and accurately. In February of 2022, I left MDHHS and started working at the
8 MPSC in Electric Operations as Departmental Analyst.

9 As a Departmental Analyst in the Electric Operations Section of the MPSC,
10 my responsibilities include analysis of electric rate cases for reasonableness and
11 prudence, regular reporting of nuclear and storms, assist with order compliance, and
12 other tasks that may entail workgroups or research.

13 Q. Have you received any work-related training since starting your employment with the
14 MPSC?

15 A. Yes. The trainings I have completed so far include:

- 16 • FEMASID Training
- 17 • Introduction to Incident Command System, ICS-100
- 18 • Basic Incident Command System for Initial Response ICS-200
- 19 • An Introduction to the National Incident Management System
- 20 • National Response Framework, An Introduction,
- 21 • MI CIMS (WebEOC) End-User Training,
- 22 • Multicultural Self-Awareness,
- 23 • NRRI-RTI Training

- The Basics for the Electric Industry
- Root Cause Training
- MIC AM Champion
- Fundamentals of Overhead Distribution Systems
- Introduction to Substation Design
- Underground Electric Distribution Fundamentals
- Electric Distribution Safety
- NARUC/NASEO & LBNL Distribution System Planning
- Integrated Right-of-Way Vegetation Management
- NARUC RTI - The Basics of Utility Accounting and Ratemaking 2024
- Rate Case Basics 2024

Q. Have you previously testified before the Commission?

A. Yes. I have filed testimony in the following cases:

<u>Case No</u>	<u>Company</u>	<u>Type of Case</u>	<u>Subject of Testimony</u>
U-21286	UPPCO	Electric Rate	Tree Trim and Facilities
U-21297	DTE	Electric Rate	Tree Trim, Streetlighting, Storm Restoration
U-21389	Consumers	Electric Rate	Line Clearing, Streetlighting, Storm Restoration
U-21555	UPPCO	Electric Rate	Distribution Capital Expenditures

1 Q. What is the purpose of your testimony in this proceeding?

2 A. The purpose of my testimony is to present the Michigan Public Service Commission
3 Staff's (Staff) recommendations regarding DTE Electric Company's (DTE Electric, DTE,
4 or the Company) Tree Trimming and Service Restoration programs.

5 Q. Are you sponsoring any exhibits?

6 A. No, I am not sponsoring any exhibits in my direct testimony.

7
8 **Tree Trimming Expenses**

9 Q. Please briefly describe the Company's Tree Trim program.

10 A. Rachel Steudle explains DTE's tree trimming program on page 4 lines 18-23 of her direct
11 testimony.

12 The Tree Trimming Pillar focuses on keeping vegetation (trees, brush, vines) clear of our
13 overhead electrical equipment, including poles, wires, transformers, etc. The objectives
14 of these investments are to reduce tree-related safety hazards and to reduce the volume of
15 tree-related trouble cases, thereby increasing customer reliability. All vegetation
16 management investments are made through the Company's Tree Trimming Program.
17

18 Q. When does the Company plan on completing their current tree trim surge program?

19 A. Rachel Steudle states in testimony on page 6 lines 23-24, that DTE plans on completing
20 the surge program by the end of 2025. Once the surge program is completed the
21 Company will be in their post-surge period. It is extremely crucial that DTE completes all
22 reclaim miles by the end of 2025 so the Company can be in their post-surge period. DTE
23 plans on continuing its maintenance of tree trimming by using a risk-based/variable cycle
24 approach. Rachel Steudle states in testimony on page 28 lines 14-21, with a risk-based
25 cycle approach the Company would be adjusting cycle lengths based on tree species
26 growth rates, risk of outages, and cost of trimming using LiDAR technology.

1 Q. Please explain DTE's proposal for remaining funding for the completion of the tree trim
2 surge program.

3 A. Rachel Steudle explains DTE's proposal on page 23 lines 24-25 of her direct testimony.

4 The Company proposes to address the \$110 million through a combination of incremental
5 regulatory asset in 2025 (\$87 million) and increasing the base O&M (\$23 million) in
6 2026. The regulatory asset would be required to address the remaining reclaim miles
7 needed to complete the Surge. The increase in base O&M is to fund trimming on-cycle
8 miles based on the new projections. Increasing the O&M for the first year post-Surge
9 would set the appropriate baseline budget for a fully on-cycle system into the future.
10

11 Rachel Steudle states on page 18 lines 1-21, the reason behind this requested amount is
12 because back in 2015-2017 DTE had third-party consultant (ECI) complete a study
13 regarding their vegetation management program. After ECI analysis DTE found that the
14 surge would cost \$1,131 million, \$721 million treated as O&M and \$410 million booked
15 as a regulatory asset (Rachel Steudle testimony page 16 lines 11-14). Towards the end of
16 2023 DTE realized they needed more funding than originally projected to get their whole
17 system to a 5-year cycle due to various cost drivers.

18 Q. Does Staff support the Company's tree trimming request of \$240,000,000 in 2025?

19 A. Yes, Staff supports the Company's 2025 tree trimming request of \$109,000,000 in Base
20 O&M, \$43,700,000 in regulatory asset that was approved in Case No. U-21297, and
21 \$87,000,000 in incremental regulatory asset all totally \$240,000,000.
22
23
24

25 Tree Trimming Recommendations

26 Q. Please explain DTE's proposal for risk-based cycle clearing after the completion of their
27 surge program.

1 A. Rachel Steudle states on page 28 lines 14-21 of her direct testimony,

2 As the Company enters the final years of the Surge, the Company recognizes that
3 there are opportunities to adjust the target cycle for different parts of the system
4 utilizing technology such as LiDAR. Adjusting cycle lengths based on tree species'
5 growth rates, risk of outages, and cost of trimming will further improve trimming
6 efficiencies and provide reliability benefits to customers. With the acquisition of
7 LiDAR tree density and encroachment data combined with tree species data the
8 Company has acquired over the course of the Surge program, DTE Electric has the
9 necessary information to make data-driven improvements to the program.
10

11
12 Q. Does Staff support the Company's proposal for risk-based cycle trimming after the
13 completion of the surge program?

14 A. At this time, Staff would like to see the results of the third-party audit, currently being
15 conducted by the Liberty Consulting Group, to determine what would be the best option
16 for the Company regarding a definitive tree trimming program after the surge program is
17 completed. The results of the audit may give Staff answers regarding any tree trimming
18 specifications the Company may need to use and potential cycle lengths that will be
19 beneficial for DTE's service territory.

20 Q. Please explain DTE's proposal regarding Staff's recommendation for more aggressive
21 tree trimming of zones 2 and 3.

22 A. Rachel Steudle states on page 37 lines 9-14 of her direct testimony,

23 The Company proposes comparing circuits trimmed on our regular maintenance program
24 (control group) to circuits trimmed for construction projects (test group). The Company
25 has a small subset of circuits that have been trimmed to a more expansive specification,
26 with all overhang removed, in preparation for construction projects. The Company can
27 compare the cost and reliability of these two groups to understand the impact of
28 potentially changing the specification.
29

30 Q. Does Staff support the Company's proposal for more aggressive tree trimming for zones
31 2 and 3.

1 A. Staff supports DTE's proposal to look at circuits trimmed on regular maintenance versus
2 circuits trimmed during construction projects. Staff believes this approach will help
3 determine whether zones 2&3 need to be trimmed more aggressively or not.
4

5 Storm Restoration Expenses

6 Storm Restoration

7 Q. Please briefly describe the Company's Storm Restoration expenses.

8 A. DTE storm restoration program entails the Company completing restoration activities
9 after a storm occurs. Staff had difficulty finding in testimony from the Company a
10 description stating what it is spending storm restoration expenses on and what the
11 Company defines as storm restoration expense. Staff recommends that the Company
12 provide a brief description in future cases of what the Company defines as storm
13 restoration expenses and describe what the Company plans on spending their storm
14 restoration expenses on.

15 Q. Did Staff review the Company's projected test year for service restoration O&M
16 expense?

17 A. Yes, Staff reviewed the Company's projected test year service restoration spending of
18 \$64,500,000 in O&M expenses. This amount can be found in Exhibit A-13 Schedule
19 C5.6 page 2 lines 1-8.

20 Q. Does Staff support the Company's requested \$64,500,000 in service restoration for the
21 projected test year O&M expense?

22 A. Yes, staff approves the spend of \$64,500,000 for the projected test year O&M expense
23 for service restoration.

1 Storm Restoration Cost Sharing Mechanism

2 Q. Please briefly describe the Company's Storm Restoration Cost Sharing Mechanism.

3 A. DTE is proposing a Storm Restoration Cost Sharing Mechanism that will become
4 effective January 1, 2025. Company witness Foley explains in his direct testimony on
5 page 23 lines 1-25, that storm restoration O&M expenses follow a five-year trailing
6 average and are authorized for recovery from customers through base rates. At the end of
7 each year, storm restoration expenses would be compared to what has been authorized to
8 be recovered from customers in base rates. Any difference between storm restoration
9 expenses for the year and those that have been authorized for recovery will be equally
10 shared between the company and their customers. Mr. Foley explains in detail how this
11 will work on page 23-24 lines 23-25 and 1-3 of his direct testimony.

12 If actual storm restoration O&M expenses are less than projected, the Company returns
13 50% of the difference to customers by recording that amount as a Regulatory Liability. If
14 actual storm restoration O&M expenses are more than projected, the Company recovers
15 50% of the difference from customers by recording that amount as a Regulatory Asset.
16 Regulatory Assets and/or Liabilities accumulate between general rate cases until a
17 subsequent general rate case when any net Regulatory Liability or Regulatory Asset is
18 addressed.
19

20 Mr. Foley testifies that this mechanism will help the Company control costs. On page 26,
21 lines 8-15 of his direct testimony he states the following:

22 [T]he Company is proposing the equal sharing of costs that differ from those
23 authorized for recovery in base rates. The sharing of costs ensures that the
24 Company has a strong incentive to control costs regardless of what actual costs
25 are for a given year. Specifically, if actual costs are greater than projected, the
26 Company is incentivized to control costs because it must absorb 50 cents of every
27 incremental dollar that is spent. If actual costs are less than projected, the
28 Company is still incentivized to control costs because it is allowed to retain 50
29 cents of every incremental dollar that is saved.
30

1 Q. Does Staff support the Company's request for a Storm Restoration Cost Sharing
2 Mechanism?

3 A. No, Staff does not support the Storm Restoration Cost Sharing Mechanism. Staff believes
4 this mechanism should not be approved because 1) Staff is supporting the full-service
5 restoration expense for the test year; 2) the Commission rejected similar mechanisms in
6 prior cases U-20963, U-20697, and U-21389; and 3) Staff would like to see results from
7 the third-party audit to further determine cost savings in storm restoration expenses. In
8 Case No. U-21305 the Commission ordered a third-party audit be completed by a
9 consultant who will investigate Consumers and DTE's distribution systems. After the
10 audit is completed, the results may show cost savings for DTE and give Staff ideas on
11 what could be beneficial to both the Company and their customers.

12 Storms are also progressively getting worse each year. Customers may never
13 see a benefit from the proposed storm restoration mechanism due to the Company
14 spending over the requested amounts each year.

15 Finally, the way the Company currently recovers storm restoration expenses
16 provides a stronger incentive to control costs than the Storm Restoration Cost Sharing
17 Mechanism. The Company currently keeps 100% of savings, rather than 50%, and
18 absorbs 100% of costs overages, rather than 50%. The Company's proposal dulls these
19 incentives.

20 21 Summary

22 Q. Please summarize your recommendations.

- 1 A. 1. Staff approves the spend of \$109,000,000 in Base O&M for 2025 for tree trimming.
2 Staff also supports \$87,000,000 in incremental regulatory asset to complete the surge
3 program.
4 2. Staff recommends waiting on results of Audit to determine if risk-based cycle tree
5 trimming works for DTE Electric's service territory.
6 3. Staff approves DTE's proposal to investigate more aggressive trimming of zones 2&3.
7 4. Staff approves the spend of \$64,500,000 for the projected test year O&M expense in
8 service restoration.
9 5. Staff recommends the Storm Restoration Cost Sharing Mechanism not be approved.
10

11 Q. Does this conclude your testimony?

12 A. Yes.
13

1 MR. ORRIS: Staff moves to bind in the
2 Direct Testimony of Ally Durfee, consisting of a cover
3 sheet and six pages of qualifications, questions, and
4 answers. Ms. Durfee sponsored no exhibits.

5 JUDGE WALLACE: Is there any objection to
6 binding in the testimony of Ms. Durfee?

7 Hearing none, the testimony is bound in.

8 (Testimony bound in.)

9 - - -

S T A T E O F M I C H I G A N
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the application of	)	
DTE ELECTRIC COMPANY	)	
for authority to increase its rates, amend	)	Case No. U-21534
its rate schedules and rules governing the	)	
distribution and supply of electric energy,	)	
<u>and for miscellaneous accounting authority.</u>	)	

QUALIFICATIONS AND DIRECT TESTIMONY OF
ALLY DURFEE
MICHIGAN PUBLIC SERVICE COMMISSION

July 26, 2024

1 Q. Please state your full name and business address for the record.

2 A. My name is Ally Durfee, and my business address is 7109 West Saginaw
3 Highway, Lansing, Michigan 48917.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission (MPSC or
6 Commission) as a Public Utilities Engineer in the Electric Operations Section of
7 the Energy Operations Division.

8 Q. Please describe your educational background.

9 A. I earned a Bachelor of Science degree in Civil Engineering from Utah State
10 University in 2011.

11 Q. What is your professional background?

12 A. In 2013, I began working at Rocky Mountain West Telecom (RMWT), a
13 telecommunications engineering firm in Utah, as an Engineering Assistant. I was
14 later promoted to department manager. While working at RMWT, I gained a lot
15 of experience working with many electric utilities to gain joint use rights on poles.
16 I completed many projects involving upwards of 500 poles and became very
17 familiar with the NCEES standards for pole attachments. I completed the CET
18 Design Methods and Procedures training course in 2021. I started with the MPSC
19 a Public Utilities Engineer in the Electric Operations section in April of 2022.
20 My current responsibilities include reviewing reasonableness and prudence of
21 electric rate cases and testifying on my findings.

22 Q. Have you received any work-related training since starting your employment with
23 the MPSC?

A. Yes. In June of 2022, I completed the Michigan Infrastructure Council Asset Management Champion Course through the Michigan Infrastructure Council. I also completed Stray Voltage Training that same month. I completed the IPU's Annual Regulatory Studies Program Fundamentals Course, the Incident Investigation, Root Cause Analysis Training and MORT Certification, and the Basics Practical Regulatory Training for the Electric Industry. I have also completed several EUCI training courses including Distribution Reliability Fundamentals, Electric Utility Pricing: Trends in Cost Recovery, Electric Distribution Safety, and Electric Distribution Planning Fundamentals. I attended the Distribution System Planning and Resilience Training by NASEO, NARUC & LBNL.

Q. Have you previously testified before the Commission?

A. Yes. I have filed testimony in the following cases:

<u>Case No.</u>	<u>Company</u>	<u>Type of case</u>	<u>Assisted with</u>
U-21224	Consumers Energy	Electric Rate	Service Restoration, Line Clearing, and CVR
U-21286	Upper Peninsula Power Company	Electric Rate	Substation Projects
U-21461	Indiana Michigan Power Company	Electric Rate	Distribution Capital Expenditures

Q. Have you provided technical assistance in any other cases?

A. Yes, in the following case:

<u>Case No.</u>	<u>Company</u>	<u>Type of Case</u>	<u>Assisted with:</u>
U-21297	DTE Electric	Electric Rate	Distribution capital

1 Q. What is the purpose of your testimony in this proceeding?

2 A. The purpose of my testimony is to present the Michigan Public Service
3 Commission Staff's (Staff) recommendations regarding DTE Electric Company's
4 (DTE or the Company) strategic capital programs.

5 Q. Are you sponsoring any exhibits?

6 A. No.

7 **Strategic Capital Programs**

8 Q. Did Staff review Company's proposed distribution strategic capital expenditures?

9 A. Yes, Staff reviewed the Company's proposed distribution strategic capital
10 expenditures.

11 Q. Which categories are considered to be distribution strategic capital?

12 A. The Company categorizes distribution strategic capital into 3 categories. They are
13 Infrastructure Resilience and Hardening, Infrastructure Redesign and
14 modernization, and Technology and Automation.

15 **Infrastructure Resilience and Hardening**

16 Q. Briefly describe the infrastructure Resilience and Hardening category.

17 A. The Infrastructure Resilience and Hardening Pillar includes programs and projects
18 focused on near-term grid infrastructure investments to harden the system against
19 an increasing frequency and severity of high winds and storms, address frequent
20 outage circuits, and replace damaged and/or defective infrastructure.

21 Q. What are the projected expenditures for the infrastructure resilience and hardening
22 category?

1 A. The company is projecting \$671,539,000 for the 2023 and 2024 bridge period and
2 \$364,706,000 for the 2025 test year.

3 Q. Do you have any adjustments to this category?

4 A. At this time, no.

5 **Infrastructure Redesign and Modernization**

6 Q. Briefly describe the Infrastructure Redesign and Modernization category.

7 A. The Infrastructure Redesign and Modernization category focuses on
8 fundamentally rebuilding and modernizing the near century old grid to support the
9 long-term grid needs. The specific investments in this pillar are essential to
10 meeting the evolving needs of customers, including adoption of electric vehicles
11 (EVs) and other forms of electrification, distributed energy resources (DER), and
12 the evolving ways in which customers are interacting with the grid.

13 Q. What are the projected expenditures for the Infrastructure Redesign and
14 Modernization category?

15 A. The Company is projecting \$550,740,000 for the 2023 and 2024 bridge period
16 and \$227,003,000 for the 2025 test year.

17 Q. Do you have any adjustments to this category?

18 A. At this time, no.

19 **Technology and Automation**

20 Q. Briefly describe the Technology and Automation Category.

21 A. Investments in new technologies are a fundamental part of the grid, improving the
22 way modern electric grids operate and resulting in improved reliability,
23 operability, and safety. They also provide new opportunities to improve

1 operations in ways that benefit customers, such as the ability to automatically
2 isolate outages to limit the number of impacted customers. An additional critical
3 function is to provide real-time visibility for system operators and engineers into
4 circuit and substation loading. This loading data is critical to managing circuits
5 efficiently both today and in the future, and to accommodating electric vehicles
6 and increasing numbers of DER such as solar, and energy storage.

7 Q. What are the projected expenditures for the Technology and Automation
8 Category?

9 A. The Company is projecting \$287,524,000 for the 2023 and 2024 bridge period
10 and \$235,571,000 for the 2025 test year.

11 Q. Do you have any adjustments to this category?

12 A. At this time, no.

13 Q. Are the results of the third-party audit of the Company, which was initiated by the
14 Commission in Case No. U-21305, available at this time?

15 A. No. The results are not currently available but are expected to be later in 2024.

16 Q. Can the results of the audit cause spending priorities to change?

17 A. Yes, the results of the audit have the potential to change spending priorities of the
18 Company depending on what are deemed the best investments to reach the goals
19 of the Company regarding its electric distribution system.

20 Q. Please summarize your recommendations.

21 A. At this time staff has no recommended adjustments to the strategic capital
22 programs.

23 Q. Does this conclude your testimony?

1 || A. Yes.

1 MR. ORRIS: Staff moves to bind in the
2 Testimony of Cody S. Matthews, consisting of a cover
3 sheet and ten pages of qualifications, questions, and
4 answers. Mr. Matthews also sponsored the following
5 exhibits: S-8.0, S-8.1, S-8.2.

6 JUDGE WALLACE: Is there any objection to
7 binding in the testimony of Mr. Matthews?

8 Hearing none, the testimony is bound in.

9 Is there any objection to the admission
10 of Exhibits S-8.0, S-8.1, or S-8.2?

11 Hearing none, those exhibits are
12 admitted.

13 (Testimony bound in.)

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S T A T E O F M I C H I G A N
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the application of	)	
DTE ELECTRIC COMPANY	)	
for authority to increase its rates, amend	)	Case No. U-21534
its rate schedules and rules governing the	)	
distribution and supply of electric energy,	)	
<u>and for miscellaneous accounting authority.</u>	)	

QUALIFICATIONS AND DIRECT TESTIMONY OF
CODY S. MATTHEWS
MICHIGAN PUBLIC SERVICE COMMISSION

1 Q. Please state your name and business address.

2 A. My name is Cody S. Matthews. My business address is 7109 W. Saginaw Hwy.,
3 Lansing, Michigan 48917.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission (MPSC or
6 Commission) as a Public Utilities Engineer Specialist in the Interconnection and
7 Distributed Energy Resources Section of the Energy Operations Division.

8 Q. Please describe your educational background.

9 A. I earned a Bachelor of Science degree in Engineering from Michigan State
10 University in 2014.

11 Q. Would you please describe your professional background.

12 A. In 2014 I began working for the MPSC in the Smart Grid Section. I reviewed
13 sections of utility rate case filings that pertained to smart grid, advanced metering
14 infrastructure (AMI), demand response (DR), information technology (IT), and
15 cyber security. In 2019 I transferred into the Renewable Energy Section, which
16 was renamed the Interconnection and DER section as of August 2022, and am
17 focusing on electric provider's Renewable Energy (RE) Plan and reconciliation
18 filings, electric utility interconnection, integrated resource plan (IRP) filings,
19 energy storage, and activities related to the Public Utility Regulatory Policies Act
20 (PURPA) of 1978.

21 Q. Have you received any work-related training since starting your employment with
22 the MPSC?

1 A. Yes. I have attended several programs hosted by the Institute of Public Utilities at
 2 Michigan State University, including Introduction to Public Utility Regulation,
 3 the full two-week fundamental and intermediate course, and the Advanced
 4 Regulatory Studies Program, as well as the Michigan Forum on Economic
 5 Regulatory Policy and the Rate Making Course. Additionally, I have participated
 6 in several conferences both in person and online concerning cyber security, IEEE
 7 1547, and other renewable energy related topics.

8 Q. Have you previously testified before the Commission?

9 A. Yes, I have testified in the following cases:

<u>Case Number</u>	<u>Company</u>	<u>Case Type/Subject</u>
U-17767	DTE Electric Company	Rate Case
U-17999	Consumers Gas Company	Rate Case
U-18014	DTE Electric Company	Rate Case
U-18255	DTE Electric Company	Rate Case
U-18370	Indiana Michigan Power Co.	Rate Case
U-18999	DTE Gas Company	Rate Case
U-20137	Indiana Michigan Power Co.	Opt-Out Tariff
U-20162	DTE Electric Company	Rate Case
U-20165	Consumers Energy Company	IRP
U-15800	Commission's Own Motion	2019 Transfer Price
U-18091	DTE Electric Company	Avoided Cost Update
U-20350	Upper Peninsula Power Co.	IRP
U-20471	DTE Electric Company	IRP

1	U-20485	Indiana Michigan Power Co.	RE Recon
2	U-20591	Indiana Michigan Power Co.	IRP
3	U-15800	Commission's Own Motion	2020 Transfer Price
4	U-20561	DTE Electric Company	Rate Case
5	U-18232	DTE Electric Company	RE Plan
6	U-20697	Consumers Energy Company	Rate Case
7	U-20713	DTE Electric Company	VGP
8	U-15800	Commission's Own Motion	2021 Transfer Price
9	U-20851	DTE Electric Company	RE Plan
10	U-20963	Consumers Energy Company	Rate Case
11	U-21090	Consumers Energy Company	IRP
12	U-21009	Consumers Energy Company	RE Plan
13	U-21081	UMERC	IRP
14	U-21010	DTE Electric Company	RE Recon
15	U-21148	Consumers Energy Company	Rate Case
16	U-15800	Commission's Own Motion	2022 Transfer Price
17	U-21189	Indiana Michigan Power Co.	IRP
18	U-20836	DTE Electric Company	Rate Case
19	U-21224	Consumers Energy Company	Rate Case
20	U-21286	Upper Peninsula Power Co.	Rate Case
21	U-20803	Consumers Energy Company	PSCR Recon
22	U-21198	DTE Electric Company	RE Recon
23	U-21197	Consumers Energy Company	RE Recon

1	U-21193	DTE Electric Company	IRP
2	U-21172	DTE Electric Company	VGP
3	U-21297	DTE Electric Company	Rate Case
4	U-15800	Commission's Own Motion	2023 Transfer Price
5	U-21389	Consumers Energy Company	Rate Case
6	U-21410	Consumers Energy Company	DR Recon
7	U-21374	Consumers Energy Company	VGP
8	U-21353	DTE Electric Company	RE Recon
9	U-21352	Consumers Energy Company	RE Recon
10	U-18091	DTE Electric Company	Avoided Cost Update
11	U-15800	Commission's Own Motion	2024 Transfer Price
12	U-21555	Upper Michigan Power Co.	Rate Case

1 Q. What is the purpose of your testimony?

2 A. The purpose of my testimony is to present the MPSC Staff's (Staff)
3 recommendations for DTE Electric Company's (DTE or the Company) proposed
4 commercial and industrial (C&I) battery demand response pilot, the distributed
5 generation program, and the proposed non-wires alternative (NWA) pilots.

6 Q. Are you sponsoring any exhibits in this proceeding?

7 A. Yes, I am sponsoring the following exhibits:

8 Exhibit S-8.0, Discovery Response STDE-3.11h

9 Exhibit S-8.1, Discovery Response STDE-3.11g

10 Exhibit S-8.2, Discovery Response STDE-3.11i

11 Q. Were these exhibits developed by you or under your supervision?

12 A. Yes.

13 C&I Battery Storage Demand Response Pilot

14 Q. Please describe the Company's proposal for the C&I battery storage pilot.

15 A. The Company is proposing to install two batteries on large customer sites. Each
16 battery will be up to 250 kW/1 MWh in size with the potential to be located at up
17 to two customer sites to reduce peak customer and system demand for an event of
18 up to 4 hours. The Company is targeting customers who are enrolled on the
19 Company's D4 rate, D6.2 rate or D11 rate.¹

20 Q. Has the Company requested recovery of this program previously?

¹ DTE Exhibit A-12, B5.6.1.

1 A. Yes. In the Company's previous rate cases U-20836, and U-21297, DTE
2 requested approval of this program.

3 Q. Did the Commission take a position on this program in that filing?

4 A. Yes. In its order in case No. U-20836 the Commission found the proposal to be
5 lacking details, which made it impossible for the Commission to evaluate the
6 potential effectiveness of the pilot and whether it will provide sufficient benefit to
7 ratepayers in relation to the cost.² While its order in Case No. U-21297 the
8 Commission agreed with Staff's recommendation in that case to disallow half of
9 the program costs the Commission stated, "Commission finds it would not be
10 reasonable or prudent, in this case, to approve funding for a second participant
11 that has not been identified."³

12 Q. Has the Company provided more details about the proposed program in this
13 filing?

14 A. The Company provided an update that it has the storage equipment but is waiting
15 on switch gear equipment due to the extended lead time.⁴ While the Company has
16 continued to look for customers to participate it has not been successful at this
17 time. Additionally, the Company has not completed the installation of the first
18 participants battery and therefore has not begun any testing of the battery for the
19 purposes of the pilot. While Staff understands the long lead times for the
20 equipment, Staff does have concerns about the amount of time it is taking to find
21 a second customer who is willing to participate. Given that this program appears

² U-20836 11/18/2022 Commission Order p.316

³ U-21297 12/1/2023 Commission Order p. 247

⁴ Testimony of Keegan O. Farrell, p.30

1 to have minimal costs to the participant and provides the participant with
2 essentially \$2,000,000 in battery equipment to utilize on site without charging a
3 fee, Staff would have expected much more interest in the program. Additionally,
4 the company still has no agreements in place with the first participant on battery
5 use or charging which would be required prior to the operation of the battery.⁵

6 Q. Does Staff have any recommendations about this pilot?

7 A. Yes. Staff recommends the Company limit the current pilot to a single participant
8 given the difficulty the Company has experienced in finding a willing second
9 participant to date. This would allow the Company to focus on the single
10 participant that has agreed to participate and allow more flexibility in the use of
11 the second battery. Staff recommends the Company then use this second battery
12 to conduct a follow-up pilot once it is able to gain operational information from
13 the initial pilot. Given that the Company is not planning to charge a fee to
14 participating customers for enrollment in the program, Staff recommends that the
15 second pilot have a fee structure for participation.⁶ As discussed in more detail
16 below, Staff finds it important to pilot charging a fee for this type of program, as
17 this would more closely mirror what a program of this type would look like and
18 allow for a gauge of customer interest. Once the Company has begun testing and
19 determining a value of this program Staff recommends finding a second
20 participant and charging some portion of the battery cost to the participating
21 customer.

⁵ Exhibit S-8.0 Discovery Response STDE-3.11h

⁶ Exhibit S-8.1 Discovery Response STDE-3.11g

1 Q. Has the Commission commented on this issue previously?

2 A. Yes. In order in Case No. U-21297 the Commission found that that consideration
3 of whether the cost of the battery should be shared with future C&I participants,
4 and a method for the customer to share the energy savings from use of the battery,
5 should be conducted when and if the pilot is transitioned to a permanent
6 program.⁷

7 Q. Why does Staff find it to be important that the second participant have some kind
8 of fee to participate?

9 A. There are several reasons Staff finds it to be important that that a fee structure be
10 made for a second participant. First, this would be more representative of how a
11 final program of this type may work. Previously the Company proposed a
12 residential battery program which involved the customers paying for a portion of
13 the battery. While that program was much smaller in scale it is important to note
14 that the Company's proposal included a fee associated with joining that program.
15 Additionally other national battery programs such as Green Mountain Power's
16 battery program⁸ also includes a fee to participate. Additionally, it is Staff's
17 opinion is that if a customer is required to pay to participate in the program than
18 those customers more likely to utilize the storage to its highest capabilities to
19 ensure the participation cost is recouped in the savings. Said differently, if a
20 participating customer has paid to participate in the program there is an incentive
21 to utilize the battery to recover those costs. Participating customers will be able to

⁷⁷ U-21297 12/1/2023 Commission Order p. 247

⁸ <https://greenmountainpower.com/rebates-programs/home-energy-storage/powerwall/>

1 utilize the battery to reduce demand charges and shift load away from peak times
2 which will allow them to benefit the grid and recoup the participation costs. This
3 incentive to utilize the battery is not the same for participating customers that
4 have no costs to participate as this arrangement has no costs to recoup through
5 utilization of the battery.

6 Q. Does the Company have plans for the end of the pilot?

7 A. Yes. The Company is planning to give the customer an option to purchase or rent
8 the battery or have it removed.⁹

9 Q. Does Staff find this proposal for the end of the pilot to be reasonable?

10 A. Yes. This is a very reasonable plan for the end of the pilot, but this plan does
11 confirm that there is value in charging a fee for the customer to participate in the
12 program. Given that the customer would need to purchase or rent the battery at
13 the end of the pilot, the Company itself is acknowledging that a payment for a
14 customer to participate is necessary for a full-scale program. If the Company were
15 to charge a fee for participation the customer would be accustomed to a fee and
16 using the battery to recoup its costs. This may make the customer more likely to
17 retain the battery and not strand DTE with a large battery with no plan to use at
18 this time. Staff finds it critical to test whether payments for participation would
19 impact the customer's utilization of the battery, which is accomplished by Staff's
20 recommended two-phased pilot approached.

21 Q. Does Staff have any further recommendations?

⁹ Staff Exhibit S-8.2

1 A. Yes. As previously mentioned, Staff is recommending the pilot be limited to a
2 single customer at this time. Given this recommendation Staff is also
3 recommending a disallowance of \$2,000,000 for this program which is broken
4 down as \$1.4 million during the bridge and \$0.6 million in the forecasted test
5 year.¹⁰

6 Q. Does this conclude your testimony?

7 A. Yes

¹⁰ Testimony of Keegan O. Farrell, p. 32

1 MR. ORRIS: Staff moves to bind in the
2 Direct Testimony of Lisa M. Kindschy, consisting of a
3 cover sheet and 17 pages of qualifications, questions,
4 and answers. Ms. Kindschy also sponsored the following
5 exhibits: S-16.0, S-16.1, S-16.2, S-16.3, S-16.4,
6 S-16.5, S-16.6, and S-16.7.

7 JUDGE WALLACE: Is there any objection to
8 binding in the testimony of Ms. Kindschy?

9 Hearing none, the testimony is bound in.

10 Is there any objection to the admission
11 of Exhibits S-16.0 through S-16.7?

12 Hearing none, those exhibits are
13 admitted.

14 (Testimony bound in.)

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STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

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**In the matter of the Application of)
DTE ELECTRIC COMPANY)
for authority to increase its rates, amend)
its rate schedules and rules governing the)
distribution and supply of electric energy, and)
for miscellaneous accounting authority.)**

Case No. U-21534

QUALIFICATIONS AND DIRECT TESTIMONY OF

LISA M. KINDSCHY

MICHIGAN PUBLIC SERVICE COMMISSION

1 Q. Please state your name and business address.

2 A. My name is Lisa M. Kindschy. My business address is 7109 W. Saginaw
3 Highway, Lansing, Michigan 48917.

4 Q. Where are you currently employed and in what position?

5 A. I am employed by the Michigan Public Service Commission (MPSC or
6 Commission) as a Public Utilities Engineering Specialist in the Energy Cost
7 Recovery & Generation Operations section within the Energy Operations
8 Division.

9 Q. What are your responsibilities in your current position?

10 A. I perform technical analyses in Act 304 electric plan and reconciliation
11 proceedings. In these cases, I evaluate and review power supply cost recovery
12 (PSCR) plans and reconciliations and develop MSPC Staff's (Staff) position as
13 appropriate. In addition, I review production-related operation and maintenance
14 expenses and capital expenditures as well as PSCR-related costs in rate case
15 proceedings. I am also involved in prevailing nuclear engineering matters. I
16 currently serve as the Commission's representative on the National Association of
17 Regulatory Utility Commissioners (NARUC) Staff Subcommittee on Nuclear
18 Issues – Waste Disposal, and I participate in the Nuclear Waste Strategy Coalition
19 bi-weekly conference calls.

20 Q. Please discuss your experience with the MPSC.

21 A. I began working at the MPSC in 2005 on gas cost recovery (GCR) plan and
22 reconciliation cases. In this capacity, I was responsible for performing Staff's
23 analysis and presenting Staff's position. In the fall of 2007, I began working as

1 the executive assistant to MPSC Chairman Orjiakor Isiogu. In the fall of 2008, I
2 returned to the Act 304 and Sales Forecasting section (renamed to the Energy
3 Cost Recovery & Generation Operations section) to work on PSCR plans and
4 reconciliations as described above in my current position.

5 Q. Please describe your educational background.

6 A. I earned a Bachelor of Science degree in 2002 and a Master of Science degree in
7 2005, both in Biosystems Engineering from Michigan State University.

8 Q. Have you attended any training courses or participated in any professional
9 seminars while employed at the MPSC?

10 A. Yes. In August 2006, I attended the two-week NARUC Annual Regulatory
11 Studies Program held at Michigan State University by the Institute of Public
12 Utilities (IPU). I attended a seminar sponsored by New Energy titled "How to
13 Manage Your Gas Supply Portfolio in an Uncertain Gas Market" in April 2006
14 and two courses by Electric Utility Consultants, Inc. titled "Nuclear Power
15 Fundamentals" in July 2010 and "Nuclear Power Operations and Regulations" in
16 December 2013. I have attended numerous advanced regulatory sessions hosted
17 by IPU as well as two courses – the Power Grid course in 2017 and the
18 Accounting and Ratemaking course in 2019.

19 Q. Do you hold any licenses?

20 A. Yes. I am a registered Professional Engineer in the State of Michigan and have
21 been since September 2012.

22 Q. Have you previously presented testimony before the MPSC?

23 A. Yes. I have presented testimony in the following cases:

	<u>Case No.</u>	<u>Company</u>	<u>Description</u>
1			
2	U-14547	Consumers Energy Company	Gas Rate Case
3	U-14715	Michigan Gas Utilities Corporation	GCR Plan
4	U-14718	SEMCO Energy Gas Company	GCR Plan
5	U-14401-R	Michigan Consolidated Gas Company	GCR Reconciliation
6	U-16180	Indiana Michigan Power Company	Rate Case
7	U-16801	Indiana Michigan Power Company	Rate Case
8	U-17026	Indiana Michigan Power Company	Certificate of
9			Necessity
10	U-16892-R	DTE Electric Company	PSCR Reconciliation
11	U-17767	DTE Electric Company	Rate Case
12	U-18370	Indiana Michigan Power Company	Rate Case
13	U-18404	Indiana Michigan Power Company	PSCR Plan
14	U-20350	Upper Peninsula Power Company	IRP
15	U-20223	Indiana Michigan Power Company	PSCR Plan
16	U-20359	Indiana Michigan Power Company	Rate Case
17	U-20529	Indiana Michigan Power Company	PSCR Plan
18	U-20224	Indiana Michigan Power Company	PSCR Reconciliation
19	U-20826	DTE Electric Company	PSCR Plan
20	U-20530	Indiana Michigan Power Company	PSCR Reconciliation
21	U-20836	DTE Electric Company	Rate Case
22	U-21050	DTE Electric Company	PSCR Plan
23	U-20827	DTE Electric Company	PSCR Reconciliation

1	U-21259	DTE Electric Company	PSCR Plan
2	U-21297	DTE Electric Company	Rate Case
3	U-21051	DTE Electric Company	PSCR Reconciliation
4	U-21425	DTE Electric Company	PSCR Plan
5			

1 Q. What is the purpose of your testimony?

2 A. The purpose of my testimony is to present Staff's adjustments to DTE Electric
3 Company's (DTE Electric or the Company) Steam Power Generation, MERC &
4 Fuel Supply, Nuclear Generation, and Other Power Generation capital
5 expenditures and operations and maintenance (O&M) expenses.

6 Q. Are you sponsoring any exhibits?

7 A. Yes. I am sponsoring the following exhibits:

- 8 • S-16.0: Actual capital expenditures through April 2024 for Non-Routine
9 Steam Generation additions from discovery response STDE-2.1a and STDE-2.1b
- 10 • S-16.1: Calculation of the reduction for the Monroe Bottom Ash Conversion
11 project and updated project sheets from discovery response STDE-2.1d
- 12 • S-16.2: Actual capital expenditures through April 2024 for Routine
13 Maintenance over \$1 million from discovery response STDE-2.1a and STDE-2.1b
- 14 • S-16.3: AACE Cost Estimate Classification System: Cost Estimating and
15 Budgeting
- 16 • S-16.4: Reductions for PAT0 and PAT1 Routine Maintenance capital projects
17 over \$1 million in 2024 and 2025
- 18 • S-16.5: Actual capital expenditures through April 2024 for MERC & Fuel
19 Supply from discovery response STDE-2.21a and STDE-2.21b
- 20 • S-16.6: Actual capital expenditures through April 2024 for Nuclear Generation
21 from STDE-2.15a and STDE-2.15b and Reductions for Nuclear capital projects in
22 2024 and 2025

- S-16.7: Updated O&M Exhibits for Steam, MERC & Fuel Supply, Nuclear and Other Power Generation using a 2023 Historic Year

Steam, MERC & Fuel Supply, Nuclear, and Other Power Generation Capital

Expenditures

Q. Please describe Staff's adjustments to Steam Power Generation capital expenditures.

A. Staff is recommending two adjustments to the Company's Non-Routine Steam Power Generation capital expenditures and two adjustments to the Company's Routine Maintenance projects greater than \$1 million.

Q. Please describe Staff's first adjustment to the additions for Non-Routine Steam Power Generation capital expenditures on Exhibit A-12 Schedule B5.1 page 2.

A. Staff's first adjustment is to update the capital expenditures for Non-Routine Steam Generation with actual amounts incurred through April 2024 on Exhibit A-12 Schedule B5.1 page 2 on lines 1-18. Please note that the remainder of the lines on this exhibit were reviewed by other Staff. The Company's case as filed included actual amounts through October 2023. Updating the additions to Non-Routine Steam Power Generation results in a decrease of (\$579,559) for 2023 and a decrease of (\$3,130,502) for 2024 for a total reduction to the bridge period of (\$3,710,061). Please see Exhibit S-16.0 for the calculation of these adjustments for 2023 and 2024.

Q. Please describe Staff's second adjustment to the additions for Non-Routine Steam Power Generation capital expenditures on Exhibit A-12 Schedule B5.1 page 2.

1 A. Staff's second adjustment to Non-Routine Steam Power Generation capital
2 expenditures involves an update to the costs for the Monroe Bottom Ash
3 Conversion project on line 5. In response to discovery, Staff received updated
4 project sheets that show reduced capital expenditures for the Monroe Bottom Ash
5 Conversion project. Specifically, the amounts approved by upper management
6 without contingency in the updated project sheets show a reduction to capital
7 expenditures in 2025 of (\$1,909,812) for the Monroe Bottom Ash Conversion
8 project compared to what the Company included in its case as filed. Therefore,
9 Staff recommends that the capital expenditures for the Monroe Bottom Ash
10 Conversion project be reduced in the test year by (\$1,909,812) to match the
11 Company's updated projections for spending on this project. Please see Exhibit
12 S-16.1 for the calculation of the adjustment to the Monroe Bottom Ash
13 Conversion project and the updated project sheets.

14 Q. Please describe Staff's first adjustment to the Company's Routine Maintenance
15 capital projects over \$1 million on Exhibit A-12 Schedule B5.1 pages 4-8.

16 A. Staff's first adjustment to the Company's Routine Maintenance capital projects
17 greater than \$1 million is to update the capital expenditures with actual amounts
18 incurred through April 2024 since the Company's case as filed included actual
19 amounts through October 2023. The Routine Maintenance capital projects greater
20 than \$1 million that were updated are found on Exhibit A-12 Schedule B5.1 on
21 pages 5-6. Updating Routine Maintenance capital projects greater than \$1 million
22 results in an increase of \$1,224,761 in 2023 and a decrease of (\$22,558,252) in

2024 for a total reduction to the bridge period of (\$21,333,492). Please see Exhibit S-16.2 for the calculation of this adjustment.

Q. Please describe Staff's second adjustment to the Company's Routine Maintenance capital projects over \$1 million on Exhibit A-12 Schedule B5.1 pages 4-8.

A. Staff's second adjustment to the Company's Routine Maintenance capital projects greater than \$1 million is to reduce the estimated costs for certain projects for May-December 2024 by 15% and to reduce certain project estimates by 20% in 2025. In response to discovery, DTE Electric stated that it does not classify its Steam, Hydro or Other Power Generation capital expenditures into the Class Cost Levels specified by the Association for the Advancement of Cost Engineering (AACE). Instead, the Company uses three internal levels to describe the stage of a project: 1) PAT0 is used to accept a new capital project into the process, 2) PAT1 is where detailed engineering and procurement of long lead materials is undertaken, and 3) PAT2 is where construction of the project is completed. For routine capital projects greater than \$1 million, Staff made an adjustment to all projects that were at the PAT0 and PAT1 stage as Staff typically has made adjustments for projects that are not in their final stages and where the engineering is not complete as the estimates for these projects are less certain. The stage of each project was found in the project sheets included with the Company's workpapers. For the projections for May-December 2024, Staff used the AACE Class 4 expected accuracy reduction range since these estimates are not as far into the future and reduced these estimates by 15%. For all of 2025, Staff used the AACE Class 5 expected accuracy reduction range and reduced

1 these estimates by 20%. Staff determined it was reasonable to reduce the 2025
2 cost estimates more than 2024 since most of the projects in 2025 are at the PAT0
3 stage of development and the projections are also farther into the future.
4 Furthermore, Staff concluded that reductions to the cost estimates in the bridge
5 and test period are reasonable given that the monthly actual amounts Staff
6 received compared to the projections included in the Company's original filing
7 are lower for January to April 2024. (See Exhibit S-16.2 page 4.) For these
8 reasons, Staff recommends a reduction of 15% for May-December 2024 of
9 (\$10,648,865) and a reduction of 20% in 2025 of (\$28,451,121) for all PAT0 and
10 PAT1 Routine Maintenance capital projects greater than \$1 million on Exhibit A-
11 12 Schedule B5.1 pages 6-7. Please see Exhibit S-16.4 for the calculation of the
12 adjustments in 2024 and 2025 for Routine Maintenance capital projects greater
13 than \$1 million.

14 Q. Please explain Staff's adjustment to MERC & Fuel Supply capital expenditures.

15 A. Staff is recommending one adjustment to the Company's MERC & Fuel Supply
16 capital expenditures on Exhibit A-12 Schedule B5.2. Staff's one adjustment is to
17 update the months for which actual amounts are now known through April 2024.
18 Updating MERC & Fuel Supply capital expenditures with actual amounts through
19 April 2024 results in a decrease of (\$130,514) for 2023 and an increase of
20 \$28,000 for 2024 for a total reduction to the bridge period of (\$102,514). Please
21 see Exhibit S-16.5 for the calculation of this adjustment.

22 Q. Please explain Staff's adjustments to Nuclear Generation capital expenditures.

1 A. Staff is recommending two adjustments to the Company's capital expenditures for
2 Nuclear Generation Routine and Small Projects and two adjustments to the
3 Company's capital expenditures for Nuclear Generation Non-Routine and Large
4 Projects.

5 Q. Please explain Staff's first adjustment to Nuclear Generation Routine and Small
6 projects capital expenditures on Exhibit A-12 Schedule B5.3 pages 2-3.

7 A. Staff's first adjustment is to update the capital expenditures on Exhibit A-12
8 Schedule B5.3 pages 2-3 for Nuclear Routine and Small Projects with actual
9 amounts incurred through April 2024. Updating the Company's exhibit with
10 actual amounts through April 2024 for Nuclear Routine and Small Projects results
11 in a decrease of (\$1,442,207) for 2023 and a decrease of (\$6,428,078) for 2024 for
12 a total decrease in the bridge period of (\$7,870,285). Please see Exhibit S-16.6
13 page 1 for the calculation of this adjustment.

14 Q. Please explain Staff's second adjustment to the capital expenditures for Nuclear
15 Generation Routine and Small projects on Exhibit A-12 Schedule B5.3 pages 2-3.

16 A. Staff's second adjustment to Nuclear Generation Routine and Small projects
17 capital expenditures is to reduce the Company's projected nuclear capital
18 expenditures for May-December 2024 by 15% and all capital expenditures in
19 2025 by 20%. Similar to Steam capital expenditures, Staff requested in discovery
20 what stage of planning each nuclear capital project was in. The Company's
21 response did not provide any indication of what stage of planning each project is
22 in or how complete each nuclear project is; therefore, Staff adjusted all nuclear
23 capital projects. Staff used the same approach as previously discussed for Steam

capital expenditures based on the guidance in the AACE class cost estimate accuracy range for class 4 and 5 estimates and reduced projects in May-December 2024 by 15% and all projects in 2025 by 20%. Staff's recommended reductions to 2024 and 2025 are further supported by the comparison of the actual capital expenditures through April 2024 to what the Company included in its case. Nuclear Routine and Small capital expenditures for December 2023 to April 2024 in total were 14.3% lower than the projections included in the Company's original case. Therefore, Staff determined it is reasonable to reduce the remainder of 2024 by 15%, and to reduce the 2025 test year by 20% since those estimates are farther into the future with less certainty. This adjustment is also consistent with Staff's approach to Steam Generation capital expenditures. For the reasons described above, Staff recommends a reduction of 15% for May-December 2024 of (\$3,737,313) and a reduction of 20% for 2025 of (\$8,490,015) for Nuclear Generation Routine and Small projects capital expenditures on Exhibit A-12 Schedule B5.3 pages 2-3. Please see Exhibit S-16.6 page 1 for the calculation of these adjustments.

Q. Please explain Staff's first adjustment to the capital expenditures for Nuclear Generation Non-Routine and Large projects on Exhibit A-12 Schedule B5.3 page 4.

A. Staff's first adjustment is to update the capital expenditures for Nuclear Non-Routine and Large Projects with actual amounts incurred through April 2024 on Exhibit A-12 Schedule B5.3 page 4. Updating the Company's exhibit with actual amounts through April 2024 for Nuclear Non-Routine and Large Projects results

1 in a decrease of (\$371,147) in 2023 and a decrease of (\$7,502,363) in 2024 for a
2 total decrease in the bridge period of (\$7,873,510). Please see Exhibit S-16.6
3 page 2 for the calculation of this adjustment.

4 Q. Please explain Staff's second adjustment to the capital expenditures for Nuclear
5 Generation Non-Routine and Large projects on Exhibit A-12 Schedule B5.3 page
6 4.

7 A. Similar to the capital expenditures for Nuclear Routine and Small projects, Staff's
8 second adjustment is to reduce the Nuclear Generation Non-Routine and Large
9 projects capital expenditures for May-December 2024 by 15% and all capital
10 expenditures in 2025 by 20%. As previously discussed, Staff used the same
11 approach for Steam capital expenditures based on the guidance in the AACE class
12 cost estimate accuracy range for class 4 and 5 estimates. Staff's recommended
13 reductions to 2024 and 2025 are further supported by the comparison of actual
14 capital expenditures through April 2024 to what the Company included in its case.
15 The capital expenditures for Nuclear Non-Routine and Large projects for
16 December 2023 to April 2024 in total were 12.9% lower than the projections
17 included in the Company's original case. Therefore, Staff concluded it is
18 reasonable to reduce the remainder of 2024 by 15%, and to reduce the 2025 test
19 year by 20% since those estimates are further into the future with less certainty.
20 As previously noted, this adjustment is also consistent with Staff's approach to
21 Steam Generation capital expenditures. For all the reasons discussed earlier, Staff
22 recommends a reduction of 15% for May-December 2024 of (\$9,895,210) and a
23 reduction of 20% for 2025 of (\$7,683,968) to the Company's capital expenditures

1 for Nuclear Generation Non-Routine and Large projects on Exhibit A-12
2 Schedule B5.3 pages 4. Please see Exhibit S-16.6 page 2 for the calculation of
3 these adjustments.

4 **Steam, MERC & Fuel Supply, Nuclear, and Other Power Generation O&M**
5 **Expenses**

6 Q. Please provide an overview of Staff's recommended adjustments to the
7 Company's Generation-related O&M expenses.

8 A. Staff is recommending an adjustment to each of the following categories of O&M
9 expenses: Steam Power Generation, MERC & Fuel Supply, Nuclear Generation,
10 and Other Power Generation. Specifically, Staff is recommending that the
11 Company's Steam Power Generation, MERC & Fuel Supply, Nuclear Generation,
12 and Other Power Generation O&M expenses be calculated using a 2023 adjusted
13 historical test year instead of the 2022 adjusted historical test year that the
14 Company used in its case as filed. These expenses are presented on the
15 Company's Exhibit A-13 Schedules C5.1, 5.2, 5.3, and 5.5.

16 Q. Why is Staff recommending that DTE Electric's O&M expenses for Steam Power
17 Generation, MERC & Fuel Supply, Nuclear Generation, and Other Power
18 Generation be calculated beginning with a 2023 adjusted historical test year?

19 A. There are several reasons Staff determined that using an adjusted historical 2023
20 test year as the starting point for determining these categories of O&M expenses
21 was more reasonable than beginning with 2022. First, DTE Electric experienced
22 several major changes to its generation fleet in 2022. In particular, the Company
23 retired its St. Clair and Trenton Channel power plants as well as adding the Blue

1 Water Energy Center, both occurring midway through 2022. By beginning with
2 actual 2023 expenses, adjustments for these generation fleet changes are not
3 necessary as 2023 captures both changes for the entire 12 months without the
4 need for adjustment. The second reason Staff determined that 2023 is a more
5 reasonable historical year is that 2023 O&M expenses include the actual inflation
6 experienced in 2023 without the need to be adjusted as is the case when beginning
7 with 2022. Staff requested in discovery that the Company update its Steam Power
8 Generation, MERC & Fuel Handling, and Nuclear Generation O&M expenses
9 using an adjusted 2023 historical test year to arrive at an adjusted 2025 projected
10 test year. Other Power Generation O&M expenses were provided in a response to
11 an intervenor's discovery in ABDE-1.6 Supplemental. DTE Electric's updated
12 O&M exhibits can be found in Exhibit S-16.7. Beginning with an adjusted 2023
13 historical test year results in a reduction of (\$19,392,393) to Steam Generation
14 O&M, a reduction of (\$463,140) to MERC & Fuel Supply O&M, a reduction of
15 (\$370,897) to Nuclear Generation O&M, and a reduction of (\$3,008,921) to Other
16 Power Generation O&M.

17 **Conclusion**

18 Q. Please summarize Staff's recommended adjustments to capital expenditures for
19 Steam Power Generation, MERC & Fuel Supply, Nuclear Generation, and Other
20 Power Generation that you are supporting.

21 A. Staff recommends the following adjustments to the Company's capital
22 expenditures for Steam Power Generation, MERC & Fuel Supply, Nuclear
23 Generation, and Other Power Generation:

- 1 ● A reduction of (\$579,559) in 2023 and a reduction of (\$3,130,502) in 2024 to
2 update the capital expenditures with actual amounts through April 2024 for Steam
3 Power Generation Non-Routine on Exhibit A-12 Schedule B5.1 page 2.
- 4 ● A reduction of (\$1,909,812) in 2025 to update the capital expenditures for the
5 Monroe Bottom Ash Conversion project with amounts from the revised project
6 sheets on Exhibit A-12 Schedule B5.1 page 2 line 5.
- 7 ● An increase of \$1,224,761 in 2023 and a reduction of (\$22,558,252) in 2024
8 to update the capital expenditures with actual amounts through April 2024 for
9 Routine Maintenance capital projects over \$1 million on Exhibit A-12 Schedule
10 B5.1 pages 5-6.
- 11 ● A 15% reduction for May-December 2024 of (\$10,648,865) and a 20%
12 reduction for 2025 of (\$28,451,121) to adjust down the projected capital
13 expenditures for PAT0 and PAT1 Routine Maintenance capital projects over \$1
14 million on Exhibit A-12 Schedule B5.1 pages 6-7.
- 15 ● A reduction of (\$130,514) in 2023 and an increase of \$28,000 in 2024 to
16 update the capital expenditures with actual amounts through April 2024 for
17 MERC & Fuel Supply on Exhibit A-12 Schedule B5.2 page 1.
- 18 ● A reduction of (\$1,442,207) in 2023 and a reduction of (\$6,428,078) in 2024
19 to update the capital expenditures with actual amounts through April 2024 for
20 Nuclear Routine and Small Projects on Exhibit A-12 Schedule B5.3 pages 2-3.
- 21 ● A 15% reduction for May-December 2024 of (\$3,737,313) and a 20%
22 reduction for 2025 of (\$8,490,015) to adjust down the projected capital

1 expenditures for all Nuclear Routine and Small Projects on Exhibit A-12

2 Schedule B5.3 pages 2-3.

3 • A reduction of (\$371,147) in 2023 and a reduction of (\$7,502,363) in 2024 to
4 update with actual amounts through April 2024 for Nuclear Non-Routine and
5 Large Projects on Exhibit A-12 Schedule B5.3 page 4.

6 • A 15% reduction for May-December 2024 of (\$9,895,210) and a 20%
7 reduction for 2025 of (\$7,683,968) to adjust down the projected capital
8 expenditures for Nuclear Non-Routine and Large Projects on Exhibit A-12
9 Schedule B5.3 page 4.

10 Q. Please summarize Staff's recommended adjustments to O&M expenses for Steam
11 Power Generation, MERC & Fuel Supply, Nuclear Generation, and Other Power
12 Generation that you are supporting.

13 A. Staff recommends the following adjustments to the Company's O&M expenses
14 for Steam Power Generation, MERC & Fuel Supply, Nuclear Generation, and
15 Other Power Generation:

16 • A reduction of (\$19,392,393) to Steam Generation O&M expenses on Exhibit
17 A-13 Schedule C5.1 for the 2025 test year when starting with a 2023 adjusted
18 historical test year.

19 • A reduction of (\$463,140) to MERC & Fuel Supply O&M expenses on
20 Exhibit A-13 Schedule C5.2 for the 2025 test year when starting with a 2023
21 adjusted historical test year.

1 • A reduction of (\$370,897) for Nuclear Generation O&M expenses on Exhibit
2 A-13 Schedule C5.3 for the 2025 test year when starting with a 2023 adjusted
3 historical test year.

4 • A reduction of (\$3,008,921) for Other Power Generation O&M expenses on
5 Exhibit A-13 Schedule C5.5 for the 2025 test year when starting with a 2023
6 adjusted historical test year.

7 Q. Does that complete your testimony?

8 A. Yes, it does.

1 MR. ORRIS: Staff moves to bind in the
2 Direct Testimony of Kevin S. Krause, consisting of a
3 cover sheet and 16 pages of qualifications, questions,
4 and answers. Mr. Krause sponsored no exhibits.

5 JUDGE WALLACE: Is there any objection to
6 binding in the testimony of Mr. Krause?

7 Hearing none, the testimony is bound in.

8 (Testimony bound in.)

9 - - -

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter on the Application of)
DTE ELECTRIC COMPANY)
for authority to increase its rates for)
the generation and distribution of)
electricity and for other relief.)
_____)

Case No. U-21534

QUALIFICATIONS AND REBUTTAL TESTIMONY OF
KEVIN S. KRAUSE
MICHIGAN PUBLIC SERVICE COMMISSION

August 16, 2024

1 Q. Please state your name and business address.

2 A. My name is Kevin S. Krause, and my business address is 7109 W. Saginaw Highway,
3 Lansing, MI 48917.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission (Commission or MPSC) as a
6 Gas Cost of Service Specialist within the Regulated Energy Division, Rates and Tariff
7 Section.

8 Q. How long have you been employed by the MPSC and what are your duties?

9 A. I have been employed by the MPSC since February of 2009. I was assigned to the Revenue
10 Requirements Section to analyze and make recommendations regarding Rate Base, Net
11 Operating Income, and Depreciation issues in general rate cases and depreciation rate
12 cases. In August of 2012, I was transferred to the Renewable Energy Section. In
13 November of 2016, I was transferred to the Rates and Tariff Section.

14 Q. Please describe your educational background.

15 A. I graduated from the University of Michigan in 1990 with a Bachelor of Science degree in
16 Nuclear Engineering. I received a Masters of Nuclear Engineering from the same school
17 in 1991. I also received a Masters in Business Administration from Michigan State
18 University in 1999. I have taken classes as part of the Certified Public Accountant
19 preparation program at Lansing Community College. I also attended the Institute of Public
20 Utilities - Regulatory Studies Program at Michigan State University. In the fall of 2010, I
21 completed the Depreciation Basics Training conducted by the Society of Depreciation
22 Professionals (SDP).

23 Q. Please describe your professional background.

1 A. From 1992 to 1997, I worked as a Nuclear Engineer for B & W Fuel Company in
2 Lynchburg, Virginia. My duties there included performing fuel cycle analysis and related
3 calculations. In 1998, I was a procurement intern with Public Service Electric and Gas
4 Company of Newark, New Jersey. From 2002 to 2010, I was an adjunct professor of
5 Mathematics at Lansing Community College.

6 Q. Have you previously presented testimony or helped develop the Commission Staff's (Staff)
7 position in cases before the MPSC?

8 A. Yes, I have filed or developed Staff's position in the following cases with area of testimony
9 specified:

10 U-15768: Detroit Edison Electric - AFUDC

11 U-15935: Alpena Power - Operations and Maintenance (O&M) Expense

12 U-15985: Michigan Consolidated Gas Case - Revenue Deficiency

13 U-15986: Consumers Energy Gas Case - Rate Base

14 U-16180: Indiana Michigan Electric Case - Rate Base

15 U-16166: Upper Peninsula Power Company – O&M Expense

16 U-16169: SEMCO Energy Gas Company – O&M Expense

17 U-16417: Upper Peninsula Power Company Electric Case - Revenue Deficiency

18 U-16475: Northern States Power Company Electric Case - Revenue Deficiency

19 U-16794: Consumers Energy Electric Case - Rate Base

20 U-16801: Indiana Michigan Electric Case - Rate Base

21 U-16855: Consumers Energy Gas Case - Rate Base

22 U-17026: Indiana Michigan Certificate of Necessity – Accounting

23 U-17303: Indiana Michigan Renewable Energy Plan

1	U-17321: Consumers Energy 2012 Renewable Reconciliation
2	U-17323: Indiana Michigan 2012 Renewable Reconciliation
3	U-17429: Consumers Energy Certificate of Necessity – Accounting
4	U-17631: Consumers Energy 2013 Renewable Reconciliation
5	U-17632: DTE Electric 2013 Renewable Reconciliation - Rebuttal
6	U-17633: Indiana Michigan 2013 Renewable Reconciliation
7	U-17767: DTE Electric Rate Case – Certain Nuclear Expenses
8	U-17803: Consumers Energy 2014 Renewable Reconciliation
9	U-18014: DTE Electric Rate Case – Renewable Expenses
10	U-18090: Consumers Energy – Avoided Cost
11	U-18091: DTE Electric – Avoided Cost
12	U-18322: Consumers Energy – Standby Rates – Rebuttal
13	U-18255: DTE Electric – Standby Rates – Rebuttal
14	U-18259: Presque Isle Gas – Cost of Service and Rate Design
15	U-18424: Consumers Energy Gas Rate Case – Other Gas Revenue
16	U-18999: DTE Gas Rate Case – Other Gas Revenue and Rate Design
17	U-20106: DTE Gas – Credit A
18	U-20115: SEMCO Energy Gas Company – Credit A
19	U-20182: SEMCO Energy Gas Company – Credit B
20	U-20134: Consumers Energy Rate Case – Standby and Electric Vehicle Rates
21	U-20162: DTE Electric Rate Case – DG tariff, Standby and Electric Vehicle Rates
22	U-20276: UPPCO Electric Rate Case – Rate Design
23	U-20479: SEMCO Gas Rate Case – Cost of Service

1	U-20359: Indiana Michigan Rate Case – Demand Charge pilot and DG tariff rebuttal
2	U-20561: DTE Electric - DG tariff rebuttal
3	U-20642: DTE Gas Rate Case – Cost of Service
4	U-20650: Consumers Energy Gas Rate Case – Cost of Service
5	U-20697: Consumers Energy Electric Rate Case - DG Tariff
6	U-20940: DTE Gas Rate Case – Cost of Service
7	U-20718: MGU Gas Rate Case – Cost of Service
8	U-21090: Consumers Energy Integrated Resource Plan
9	U-21148: Consumers Energy Gas Rate Case – Cost of Service
10	U-20836: DTE Electric – DG tariff and Electric Vehicles
11	U-21226: NSP Gas Rate Case – Cost of Service
12	U-21308: Consumers Energy Gas Rate Case – Cost of Service
13	U-21366: MGU Gas Rate Case – Cost of Service
14	U-21297: DTE Electric Rate Case – Electric Vehicles
15	U-21389: Consumers Energy Electric Rate Case – Electric Vehicles
16	U-21461: Indiana Michigan Electric Rate Case – DG tariff rebuttal
17	U-21374: Consumers Electric Voluntary Green Pricing Case - rebuttal
18	U-21490: Consumers Energy Gas Rate Case – Cost of Service
19	U-21291: DTE Gas Rate Case - Cost of Service

1 Q. What is the purpose of your rebuttal testimony?

2 A. The purpose of my testimony is to provide certain of Staff's recommendations on
3 Community Solar, Microgrids, Electric Vehicle (EV) tariffs and rate design in response
4 to intervening witnesses' direct testimony.

5 Q. Are you filing any exhibits?

6 A. No.

7 Community Solar

8 Q. Detroit Area Advocacy Organization's (DAAO) witness Yunus Kinkhabwala models
9 Community Solar bill savings of 20%,¹ what does the witness use to support these
10 savings?

11 A. The witness points to a DOE aim to increase bill savings from Community Solar to 10-
12 20% and a program in Illinois that guarantees bill savings of 50% for low income
13 customers.²

14 Q. Is the analysis supported by any solar cost or accepted compensation structures in
15 Michigan?

16 A. No.

17 Q. What is Staff's recommendation?

18 A. Without knowing the costs of proposed Community Solar arrays, nor the compensation
19 structure that is going to be used for these programs, it is premature to promise any bill
20 savings whatsoever. In fact, it is possible that to achieve those bill savings that a
21 community solar program may need compensation that far exceeds anything that exists in

¹ DAAO witness Yunus Kinkhabwala direct testimony, page 26.

² Ibid.

1 Michigan's legal and regulatory framework today or what could be considered
2 reasonable. Absent sufficient understanding as to how these savings will be achieved it is
3 not appropriate to guarantee them.

4 Microgrids

5 Q. Are microgrids an issue in the instant case?

6 A. Yes. Several witnesses, including DAAO witness Arjun Makhijani, Great Lakes
7 Renewable Energy Association (GLREA) witness Rob Rafson, and Clean Energy
8 Organizations (CEO) witness Curt Volkmann, discuss microgrids.

9 Q. GLREA witness Rafson defines a nanogrid as a single customer able to island from the
10 grid,³ does Staff accept this definition?

11 A. For the purposes of this case, Staff accepts the definition and will use it in the same way
12 that witness Rafson presents it.

13 Q. Is microgridding complex?

14 A. Microgrids are more complex than what would be considered traditional standard service
15 from an electric utility. They involve additional hardware and software in order to
16 balance the microgrid as well as manage the interconnection to the main grid.

17 Q. Can microgrids increase reliability and resilience?

18 A. Theoretically, yes, for customers within them. If an outage occurs due to something
19 outside of the microgrid then the microgrid should be able to successfully island and ride
20 through an outage, depending upon how long the outage lasts. At the same time, it is also

³ GLREA witness Rob Rafson direct testimony, page 7.

1 possible that individuals within the microgrid experience an outage due to distribution or
2 generation problems within the microgrid.

3 Q. DAAO witness Makhijani states that “it is evident that in all cases except a typical
4 commercial building, increasing resilience incurs net costs when benefits such as food
5 not lost, shelter provided, and avoided CO2 emissions are not included.”⁴ Do microgrids
6 cost more than traditional service?

7 A. Yes. The additional hardware and software needed to make the microgrid island as well
8 as balance properly would add costs to the system that would be in addition to the costs
9 of traditional standard service. As DAAO witness Makhijani suggests, societal benefits
10 need to be included to justify the value of microgrids.

11 Q. Does the NREL analysis provided referenced by DAAO witness Makhijani assume that
12 microgrid customers will pay for the microgrid?

13 A. It seems to, as the cost benefit analysis seems to imply that the costs will be paid for by
14 those using the microgrid. The customers that should be required to cover microgrid
15 costs will be discussed in more detail later in this testimony.

16 Q. DAAO witness Makhijani ends direct testimony by stating some issues with Michigan
17 statute and possible resolutions.⁵ Does Staff agree?

18 A. Staff finds no flaw in the witnesses’ analysis regarding ownership and community choice
19 aggregation, and agrees that the proposed resolution could repair the issues, without
20 taking a position on the proposal. Staff notes a few things that were not considered,

⁴ DAAO witness Arjun Makhijani direct testimony, page 43

⁵ DAAO witness Arjun Makhijani direct testimony, pages 51-53.

1 though. A community solar program might be able to be used in conjunction with a
2 microgrid, with the caveat being no one outside the microgrid would be able to
3 participate in that segment of the community solar program. Also, some of the NREL
4 microgrid scenarios include fossil generation and it is unclear how fossil generation
5 owned by the Company on a microgrid would interact with Michigan's clean energy
6 standard from Act 235 that requires 100% clean energy by 2040. Other potential issues
7 related to tariffs will be addressed next.

8 Q. DAAO witness Makhijani states "For instance, net metering and compensation for
9 exported electricity should reflect the fact that the entire region benefits when people are
10 sheltered and that businesses can maintain critical services like selling food and fuel."⁶

11 Is Net Metering the appropriate compensation?

12 A. No. Acts 341 and 342 of 2016 replaced Net Metering as a compensation scheme. The
13 appropriate tariffs for export would likely be DG (Rider 18), PURPA (Rider 5), and other
14 Distributed Generation (Rider 14). These will be discussed in turn.

15 Q. Are there reasons that exports should not be on DG (Rider 18)?

16 A. Yes. DAAO witness Makhijani's states, with regard to the Ernest T. Ford recreation
17 center, "I base my analysis on the case in which there is no limit on the solar system
18 capacity for the Center."⁷ However, the DG program is limited to 110% of the annual
19 load of the customer. Behind the meter installations would need to meet the conditions
20 of the DG program to qualify for Rider 18. A resilience hub like this would need an
21 exception to qualify for Rider 18 and the DG program.

⁶ DAAO witness Arjun Makhijani direct testimony, page 60.

⁷ DAAO witness Arjun Makhijani direct testimony, page 42.

1 Another reason a microgrid may not qualify for Rider 18 is the use of fossil generation.
2 It may be possible to use Rider 18 for microgrid if there is a way to guarantee and verify
3 that a fossil generator is not operating while exports are taking place. The easiest way to
4 accomplish this would be to have no fossil generation at all.

5 Q. Are there reasons that exports should not be on PURPA (Rider 5)?

6 A. Yes. Using PURPA solves the size issue mentioned for Rider 18, but it does not solve
7 the fossil generation issue. In past cases, some have suggested using renewable diesel,
8 which may be a possibility, again subject to guarantees and verification. As mentioned
9 with Rider 18, no fossil generation would be the most expedient way to qualify for this
10 Rider.

11 Q. Please describe Rider 14.

12 A. Rider 14 appears that it would be the rider that would govern microgrid exports if it fails
13 to qualify for either Rider 18 or Rider 5. To quote from the tariff, "For the purposes of
14 this Rider, eligible distributed resources include reciprocating engine generator sets,
15 small turbine generators, fuel cells, regenerative dynamometers and renewable
16 resources." This would include everything that has been proposed for microgrid
17 generation.

18 Q. Please describe Rider 3.

19 A. Rider 3 is called the "PARALLEL OPERATION AND STANDBY SERVICE AND
20 STATION POWER STANDBY SERVICE". It is for large self-service generators that
21 require the utility to be ready to serve the customer if their generation goes off-line, and
22 to provide power during maintenance outages. This requires the Company to plan for
23 the necessary generation and having distribution in place necessary to serve that load.

1 Q. Do microgrids look like large self-service customers?

2 A. To a significant extent, they do. However, a large self-generator may have one generator,
3 while a microgrid is likely to have multiple generators, and the probability of losing all
4 those resources at the same time is significantly smaller.

5 Q. Should microgrids be subject to Rider 3?

6 A. It is unclear. There would need to be serious discussions between the utility and the
7 microgrid customers surrounding peak inflow through the microgrid interconnection.

8 Q. Who should pay for microgrid costs?

9 A. Generally speaking it is the customers of the microgrid who will experience the reliability
10 and resilience benefits, so they are the ones that should be paying for the service.

11 Arguments have been made that there are important customers to society that need access
12 to reliable energy, including first responders, hospitals, etc. If these arguments are
13 accepted by the Commission, such sites could be reasonably considered for microgrids
14 that are socialized by all customers so long as all customers have access to the benefits.
15 Beyond this the arguments get considerably weaker. Establishments with a profit motive
16 like grocery stores and gas stations should consider their outage risk and decide for
17 themselves whether they want to self-fund their own backup generation for all or critical
18 loads.

19 Q. Why should microgrid customers pay a different amount from those on standard
20 electrical service?

21 A. They have significantly higher reliability and resilience enabled by expenditures specific
22 to them. This essentially means they are receiving a different type of service that should
23 have different rates.

1 Q. How would these different rates be achieved?

2 A. There are several ways; one would be a surcharge to recover microgrid specific costs or
3 incremental costs for serving the microgrid. Another way would be to create a separate
4 cost of service class specifically for microgrid users. A separate class may be
5 reasonable because they are receiving a different type of service.

6 Q. CEO witness Volkmann states “DTEE must move more quickly from pilots to
7 programs”,⁸ does Staff agree?

8 A. No. With regard to pilots, including the Port Austin microgrid pilot, it is appropriate to
9 collect data and perform a thorough evaluation of the pilot before hastily proceeding to a
10 full program status. Assuming that every customer in DTEs service territory will
11 eventually be on a microgrid is speculative, particularly considering our current
12 familiarity with microgrids as well their affordability with respect to everything else that
13 is going on in the utility space.

14 Q. GLREA witness Rafson states “If microgrid owners submeter with neighbors (as utilities
15 presently allow for large industrial customers) then DTE may have fewer customers.”⁹
16 Does Staff agree with this recommendation?

17 A. No. GLREA witness Rafson provides no citation or explanation for this claim. This
18 idea should be rejected given the lack of evidence presented.

19 Q. GLREA witness Rafson says “Nanogrids can become the hub of micro-grids allowing
20 neighbors to share in stable power.”¹⁰ Does Staff agree?

⁸ CEO witness Curt Volkmann direct testimony, pages 26-29.

⁹ GLREA witness Robert Rafson direct testimony, page 13.

¹⁰ GLREA witness Robert Rafson direct testimony, page 8.

1 A. No. Similar to the submetering idea above, nanogrids should not be expanded beyond the
 2 meter of the nanogrid. Staff also disagrees with the use of the word sharing here. Does
 3 sharing mean providing it to your neighbor without expectation for compensation?
 4 When compensation is expected that is selling, not sharing. Staff is unsure if neighbors
 5 sharing power falls within Michigan's current legal and regulatory framework.

6 Q. Later in testimony witness Rafson states, "GLREA requests the Commission to allow
 7 neighbors to expand and share their nanogrids."¹¹ Does Staff agree?

8 A. Again, Staff suspects that witness Rafson is talking here about selling and not sharing.
 9 Staff believes that selling power between different legal entities is essentially wheeling, if
 10 not effectively utility service provision, even if they are small residential customers.
 11 Running wire between different legal entities constitutes providing a distribution service
 12 if there is compensation and may constitute a distribution system if it is permanent and
 13 there is no compensation. The Company is the sole distribution service provider in its'
 14 service territory.

15 EVs

16 Demand Charge Holiday

17 Q. What does Electrify America witness Jigar Shah state with regard to DCFC rates?

18 A. Electrify America witness Shah states, "DTE should therefore modify its tariff language
 19 to allow DCFC sites built before a specified date, preferably by 2028 or later, to be able
 20 to take service under the D3 rate."¹²

21 Q. What does Walmart witness Lisa Perry state with regard to DCFC rates?

¹¹ GLREA witness Robert Rafson direct testimony, page 13.

¹² Electrify American witness Jigar Shah direct testimony, page 5.

1 A. Walmart witness Perry states, “Walmart recommends that the Commission either remove
2 the two-year limitation from Rate Schedule D3 or require the Company to collaborate
3 with interested parties to develop a public EV charging-specific rate that is informed by
4 data from the alternative COSS presented in this case as well as future data, and require
5 the Company to seek approval of such rate in its next general rate case.”¹³

6 Q. What does Michigan EIBC, IEI, and Advanced Energy United (“United”), collectively
7 referred to as “MEIU” state with regard to DCFC rates?

8 A. MEIU witness Laura Sherman states, “I recommend that both existing and new
9 customers should be allowed to access this rate schedule without the demand restriction
10 for at least four additional years, until January 1, 2030.”¹⁴

11 Q. Please provide background on the demand charge holiday.

12 A. Rate D3 was modified in Case No. U-20162 on May 2, 2019 to be open to fast charging
13 customers over the otherwise applicable 1,000 kW limit until June 1, 2024, a period of
14 five years. In case No. U-21297 rate D3 was modified to extend the date until June 1,
15 2026 and on a rolling basis for 2 years for every new DCFC site added after June 1, 2024,
16 making the longest possible holiday equal to seven years, while new stations going
17 forward can be on rate D3 for their initial two years of service. Staff also points out that
18 stations under the 1,000 kW limit can still join and remain on rate D3 as long as they
19 remain under the 1,000 kW limit.

20 Q. Should the demand charge holiday be extended?

¹³ Walmart witness Lisa Perry direct testimony, page 24.

¹⁴ MEIU witness Laura Sherman direct testimony, pages 52-53.

1 A. No. The demand charge holiday that began five years ago and will not end for another
2 two years and will be available for two rolling years to all new fast charging customers
3 has been sufficient to get the market started. The demand charge holiday should not
4 extend until market maturity or stabilization.

5 Q. Walmart witness Perry states, "However, Walmart is concerned that limiting the
6 application of Rate Schedule D3 to only two years, without a replacement EV charging
7 rate, could deter companies from investing in public EV chargers within the Company's
8 service territory due to the economic uncertainty created by rate instability."¹⁵ Does
9 Staff agree?

10 A. No. After two years on Rate D3, the customer should assume they will be moved to rate
11 D4 if their demand is more than 1,000 kW. While the switch to rate D4 may not be
12 desirable it is incorrect to characterize it as uncertainty, or instability. If their demand is
13 less than 1,000 kW then they can remain on rate D3 and the claim of uncertainty is even
14 more specious.

15 Q. What about Walmart witness Perry's request, mentioned previously, to calculate a new
16 fast charging rate going forward?

17 A. Staff takes no position in the instant case, as a fully-formed proposal has not been
18 presented by the witness. Staff requests, as Walmart suggests, that the rate is informed
19 by costs to serve those fast-charging customers. Staff continues to believe that a cost-of-
20 service study with fast charging as a separate class may be necessary to inform this new

¹⁵ Walmart witness Lisa Perry direct testimony, page 24.

1 rate, and Staff has no issue with such being presented in either the next rate case, as
2 Walmart suggests, or the case after that.

3 Q. MEIU witness Laura Sherman states “my recommendation will ensure that demand-
4 based rates do not inhibit the expansion of DCFC for sites with high demand but low
5 utilization rates in the interim.”¹⁶ Does Staff agree?

6 A. Staff disagrees. If you do not charge enough for something, then economically you will
7 get too much demand for it. Therefore, inhibiting the expansion of DCFC is preferable to
8 encouraging the growth of something that is paying less than its cost to serve.

9 Residential Contributions In Aid of Construction (CIAC) for EV charging

10 Q. After a discussion of residential CIAC MEIU witness Laura Sherman states, “The only
11 appropriate resolution is to socialize the cost of distribution system upgrades made
12 necessary by the accumulation of EV charging load.”¹⁷ Does Staff agree?

13 A. As Staff has said in previous cases, not entirely, no. It is appropriate to waive CIAC
14 requirements within reason, but it is also appropriate to set limits such that customers do
15 not place an undue strain on the system. Staff suggests that the following limits for
16 residential are appropriate:

17 All residential customers are allowed one (1) 48-amp or lower charger without
18 being assessed any costs for distribution upgrades. [Staff’s understanding is that a
19 48-amp charger requires a 60-amp circuit.]

20 Selection of any charger greater than 48-amps, or multiple chargers exceeding 48-
21 amps may trigger incremental CIAC contributions by the customer.

¹⁶ MEIU witness Laura Sherman direct testimony, page 53.

¹⁷ MEIU witness Laura Sherman direct testimony, page 49.

1 MNSC witness Douglas Jester states the following, “I therefore recommend that the
2 Commission direct DTE to waive CIAC for all new residential and commercial
3 installations of EV charging.”¹⁸ Staff responds that the limits suggested above are
4 appropriate for residential. With the help of interested parties, similar limits, if any
5 waiver of CIAC is determined to be appropriate for business customers providing (and
6 likely charging) for the service provided by the chargers, could be set for different sizes
7 of commercial customers based on voltage level of service, maximum annual demand, or
8 other characteristics that may be deemed important.

9 Cost-Benefit Analysis

10 Q. MEIU witness Laura Sherman states “After this initial forecast, BCAs may include as
11 benefits estimated revenue from charging, expected state and federal incentives, any
12 customer contributions under CIAC policies....”.¹⁹ Does Staff agree with this list?

13 A. Not entirely, no. With regard to state and federal incentives, these are benefits in the
14 context of the utility cost test because they are moneys that are external to utilities and to
15 the rate making/revenue earning process, so consideration of them as benefits is
16 appropriate. When you get to the societal cost test however, these state and federal
17 incentives are paid for by taxpayers, which means they are paid for by society. In other
18 words, they are a societal cost. See also Staff witness Nicholas Revere on this subject.

19 Q. Does this conclude your testimony?

20 A. Yes.

¹⁸ MNSC witness Douglas Jester direct testimony, page 33.

¹⁹ MEIU witness Laura Sherman direct testimony, page 14.

1 MR. ORRIS: Staff moves to bind in the
2 Rebuttal Testimony of Anne Armstrong, consisting of a
3 cover sheet and 11 pages of qualifications, questions,
4 and answers. Ms. Armstrong sponsored no rebuttal
5 exhibits and did not sponsor direct testimony.

6 JUDGE WALLACE: Thank you. Is there any
7 objection to binding in the rebuttal testimony of
8 Ms. Armstrong?

9 Hearing none, the testimony is bound in.
10 (Testimony bound in.)

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1 Q. Please state your name and business address for the record.

2 A. My name is Anne T. Armstrong. My business address is the Michigan Public
3 Service Commission's (MPSC or Commission) work site at 7109 West Saginaw
4 Highway, Lansing, Michigan 48917.

5 Q. By whom are you employed and in what capacity?

6 A. I am employed in the Customer Assistance Division (CAD) of the MPSC. I am
7 the Director of the Division, which includes the Michigan Energy Assistance
8 Program section, the Compliance and Investigation Section, and the Data Access,
9 Privacy, and IT section. The CAD also works with state agencies, utilities, local
10 governments, and non-profits on coordinating low-income energy.

11 Q. Would you please outline your educational background?

12 A. Yes. I earned a Bachelor of Arts degree in History from Yale University in 1983
13 and a Master of Health Services Administration and Policy degree from the
14 University of Michigan in 1994. I also completed the Annual Regulatory Studies
15 Program sponsored by Michigan State University (August 2018).

16 Q. Would you please outline your professional experience?

17 A. My professional experience consists of health and environmental policy advisor;
18 tribal liaison, and legislative liaison for Governor John Engler. I worked for the
19 Michigan Department of Mental Health as Administrator of Special Projects,
20 where I designed the structure of the Department of Community Health. I then
21 worked as Vice President for Strategic Planning of VHA/MIDNET, a health care
22 consortium and consulting company.

1 In 2015, I worked as the Associate Director of the Office of Urban Initiatives for
2 Governor Snyder, serving as community liaison in West and Southwest Michigan,
3 where I worked collaboratively with communities and stakeholders to address
4 issues in workforce, housing, mobility, environment, public safety, and economic
5 development by building collaborative relationships with local, state, and federal
6 governments; legislators; philanthropy; law enforcement; community agencies.
7 In 2018 I served as Director of the Michigan Agency for Energy. In 2019, I joined
8 the MPSC as Director CAD. In addition, I am the lead for the Energy
9 Affordability and Accessibility Collaborative, and co-chair of the Low-Income
10 Energy Policy Board. I also serve on the National Association of Regulatory
11 Utility Commissioners (NARUC) staff subcommittee on the Consumer and the
12 Public Interest.

13 Q. Have you previously presented testimony before the Commission?

14 A. Yes. I presented testimony in the following cases: U-21090, U-20963, U-20836.

15 Q. Have you assisted with other cases before the Commission?

16 A. Yes, I provided oversight to Staff or contributions in the following cases:
17 U-17277, U-17493, U-18060, U-18238, U-20712, U-20648, U-20757, U-20828,
18 U-20918, U-20940, U-20959, U-21043, U-21045, U-21116, U-21087, U-21122,
19 U-21148, U-21150, U-21215, U-21291, U-21297, U-21308, U-21289, U-21458,
20 U-21502.

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23

1 Q. What is the purpose of your rebuttal testimony?

2 A. The purpose of my rebuttal testimony is to respond to certain positions taken by
3 witnesses Justin Schott and Arjun Makhijani on behalf of Soulardarity and We
4 Want Green, representing the Detroit Areas Advocacy Organizations (DAAO).
5 I will begin with three recommendations on shutoff and arrearage data reporting
6 offered by DAAO witness Schott and end with recommendations on non-energy
7 benefits offered by DAAO witness Makhijani.

8 Q. On page 77 of DAAO witness Schott's testimony he states "I recommend that the
9 MPSC reinstate the monthly reporting requirements that it initially repealed in
10 MPSC Case No. U-20757. Monthly reporting is critical to track trends and
11 differentiate seasonal energy burdens that spike after periods of extreme
12 weather."¹ What is Staff's response to this statement?

13 A. Per U-20757, the Data Analysis and Regulatory Review Subcommittee held
14 multiple workgroups and through the work of this subcommittee it was
15 recommended in the March, 2023 Staff Report, Recommendation 2.1 to combine
16 the monthly Shut off and Arrearage report and the Quarterly report and to have
17 this submitted on a quarterly basis.² This recommendation combines two similar
18 reports and streamlines the reporting process: accepted by the Commission as a
19 part of the December 21, 2023, Commission Order in case U-20757.³ It is
20 important to note that regulated utilities continue to report shut off and arrearage

¹ DAAO witness Justin Schott direct testimony, p 77.

² MPSC Case No. U-20757, Staff's Interim Progress Report, 03/17/2023, p 21.

³MPSC Case No. U-20757, 12/21/2023 Order, p 22.

1 data via the U-20757 docket monthly and can be viewed on the Michigan Public
2 Service Commission's website.⁴

3 Staff and the utilities are moving towards the quarterly reporting cadence as
4 outlined in the Commission Order. The quarterly reporting is scheduled to start
5 the first quarter of 2025. Although, the reporting will be done on quarterly basis,
6 the report will still be broken down by month and will be easily accessible by the
7 MPSC website, just as the current monthly Shut off and Arrearage report is.
8 Therefore, Staff and the public will continue to be able to track trends and
9 seasonal energy burdens.

10 Q. On page 77 of his testimony DAAO witness Schott states, "Second, I recommend
11 that the MPSC set a firm timeline for DTE to begin these reports by census tract
12 and zip code. Assuming DTE already has this data available, the Company could
13 produce reports within thirty to sixty days."⁵ What is Staff's response to this
14 second recommendation?

15 A. The Commission has ordered Staff to continue to move towards zip code and
16 census track level data: recommendation 2.6 of the December 21, 2023, U-20757
17 Commission order. Staff is currently in discussions on how to move towards
18 collecting shut off and arrearage data in this form, per the order.⁶

19 Q. On page 78 of his testimony, DAAO witness Schott states, "I recommend that the
20 MPSC require DTE to provide all reports in publicly accessible and analyzable
21 format, namely .csv or .xlsx. In many cases, DTE provides only PDFs which

⁴ <https://www.michigan.gov/mpsc/regulatory/reports/other/utility-customer-data>

⁵ DAAO witness Justin Schott direct testimony, p 77.

⁶MPSC Case No. U-20757, 12/21/2023 Order, p 28.

1 cannot easily be converted. These files require extensive cleaning, which
2 materially burdens intervenors and introduces further opportunities for error.”⁷

3 What is Staff’s response to this third recommendation?

4 A. The MPSC makes the monthly Shut off and Arrearage data report publicly
5 available on its website.⁸ This is done to help Staff and the public analyze the
6 data from the report. Staff plans to continue to make the new Quarterly report
7 available in the same way. To ask any utility to keep changing the format in
8 which they provide data for reporting purposes seems excessive and burdensome.
9 The Commission has taken steps to make this data more publicly available in an
10 easy to use form.

11 Q. What is Staff’s recommendation to the Commission, in response to the above
12 recommendations made by DAAO?

13 A. Staff recommends the Commission continue with the current work ordered
14 through the Case number U-20757, December 21, 2023 order.

15 Q. What recommendations are you addressing regarding non-energy benefits as put
16 forth by DAAO witness Makhijani in direct testimony?

17 A. I am addressing three recommendations put forth by DAAO witness Makhijani’s
18 direct testimony each of which addresses the non-energy benefits of energy
19 affordability.⁹

20 Q. What is DAAO witness Makhijani’s first recommendation?

⁷ DAAO witness Justin Schott direct testimony, p 78.

⁸ <https://www.michigan.gov/mpsc/regulatory/reports/other/utility-customer-data>

⁹ DAAO witness Makhijani direct testimony, p 56-58

1 A. In direct testimony, DAAO witness Makhijani states that, “It is essential to
 2 include the non-energy benefits of affordable energy into ratemaking. The data
 3 may be scattered and incomplete, but everything indicates that non-energy
 4 benefits are huge.”¹⁰

5 Non-energy benefits as described in DAAO witness Makhijani’s direct testimony
 6 include avoided household costs of ill-health and of becoming unhoused and its
 7 attendant costs; and avoided costs to society such as costs of shelter for the
 8 unhoused, added emergency room visits, and increases in taxes and health
 9 insurance premiums. Makhijani then lays out positive non-energy benefits as
 10 better health and increased productivity for households and for society as a
 11 whole.¹¹

12 When describing how non-energy benefits could be incorporated into rate making
 13 DAAO witness Makhijani states:

14 *given that the principle of factoring in non-energy benefits is accepted for*
 15 *efficiency improvements in utility regulatory proceedings and that exactly*
 16 *the same economic principles and reasoning apply to the issue of*
 17 *universal affordability, there is a case for factoring in the costs of*
 18 *assistance and investments into rate cases. This is also an approach that is*
 19 *available to the Commission. But other approaches may be more*
 20 *equitable, such as progressive income taxes, or taxing the corporations*
 21 *that would benefit most, such as health insurance companies and hospitals*
 22 *that would have fewer uncompensated emergency room visits, or hedge*
 23 *funds that own large numbers of rental units which would recover rent*
 24 *more regularly and have lower turnover of tenants. If rates are the vehicle*
 25 *for funding the gap, it should be as an operating cost on all electricity*
 26 *sold, rather than only on residential electricity, given that a wide variety*
 27 *of non-low-income entities benefit.*¹²

¹⁰ DAAO witness Makhijani direct testimony, p 56

¹¹ DAAO witness Makhijani direct testimony, p 11

¹² DAAO witness Makhijani direct testimony, p 28-29

1 Q. What is your response to DAAO witness Makhijani's first recommendation on
2 non-energy benefits?

3 A. Many non-energy benefits lack standardized measurement methodologies. For
4 example, assigning a monetary value to improved health outcomes or the benefits
5 of remaining in one's home can be highly subjective and vary significantly
6 depending on the methodology used. In addition, this complexity and the inherent
7 uncertainty can lead to variable and subjective estimates that may not be reliable.
8 In his argument, DAAO witness Makhijani states that, "...the principle of
9 factoring in non-energy benefits is accepted for efficiency improvements in utility
10 regulatory proceedings."¹³ This is not the case in Michigan where utilities have
11 provided societal costs tests in energy efficiency proceedings as references but
12 utility EWR portfolios are only required to meet the Utility Resource Cost Test.
13 PA 229 of 2023 provides:

14 *Sec. 73, (2) the commission determines that the energy waste reduction plan*
15 *meets the utility system resource cost test and is reasonable and prudent.*
16 *Sec. 89 (1) not recoverable unless those costs are reasonable and prudent and*
17 *meet the utility system resource cost test.*
18 *Sec. 95 (3) reasonable and prudent and meet the utility systems resource cost*
19 *test.*
20

21 And [Act 235 of 2023](#) states:

22 *Sec. 13 (c) ...Utility system resource cost test" means a standard that is*
23 *met for an investment in energy waste reduction if, on a life cycle basis,*
24 *using a real societal discount rate based on actual long-term United*
25 *States treasury bond yields, the total avoided supply-side costs to the*
26 *provider, including representative values for electricity or natural gas*
27 *supply, transmission, distribution, and other associated costs, are greater*
28 *than the total costs to the provider of administering and delivering the*

¹³ DAAO witness Makhijani direct testimony, p 27

1 *energy waste reduction program, including net costs for any provider*
2 *incentives paid by customers and capitalized costs recovered under*
3 *section 89.*
4

5 Therefore, there is no accepted methodology for quantifying or evaluating non-
6 energy benefits from legislatively mandated energy waste reduction program
7 proceedings that can be extrapolated to the affordability of rates in electric rate
8 case proceedings in Michigan.

9 DAAO witness Makhijani also states that approaches outside of rate regulation
10 may be more equitable such as progressive income taxes or taxes on corporations
11 that benefit from customers having affordable rates.¹⁴ This vague assertion points
12 to the complexity of addressing non-energy benefits when determining rates when
13 the causes of non-energy benefits (avoided costs or positive benefits) involve
14 broader societal issues which may not fit solely within the Commission's
15 purview.

16 DAAO witness Makhijani also states, "the data is scattered and incomplete,"
17 when referring to quantifying non-energy benefits.¹⁵ This statement underscores
18 the difficulty of assessing non-energy benefits in the instant case.

19 In summary, while non-energy benefits may be important to understand energy
20 bills' impact on other aspects of a customer's life, their inclusion in ratemaking
21 poses methodological and regulatory challenges that may outweigh the perceived
22 advantages, therefore, Staff recommends the Commission reject DAAO witness
23 Makhijani's recommendation.

¹⁴ DAAO witness Makhijani direct testimony, p 27-28

¹⁵ DAAO witness Makhijani direct testimony, p 56

- 1 Q. What is the next recommendation of DAAO witness Makhijani you will be
2 responding to?
- 3 A. In his second recommendation in direct testimony, DAAO witness Makhijani asks
4 the Commission to “conduct or commission a comprehensive study that would
5 quantify non-energy benefits. The results must include the costs of unaffordable
6 energy as much as possible and estimate the benefits of achieving universal
7 affordability.” He further asserts that “such a study should not delay the
8 implementation and universalization of affordable electricity, given the magnitude
9 of the non-energy costs of unaffordable energy.”¹⁶
- 10 Q. What is your response to DAAO witness Makhijani?
- 11 A. As stated previously, quantifying and tracking non-energy benefits of
12 affordability is complex with no accepted methodology for standardizing
13 quantification or tracking. It is also unclear how quantifying and tracking non-
14 energy benefits could inform or influence ratemaking outside of simply bolstering
15 an argument that energy affordability has a positive impact on customers, which
16 DAAO witness Makhijani’s testimony made clear. In addition, many of the non-
17 energy benefits of affordability are not solely within the Commission’s
18 jurisdiction, including remedies such as energy assistance through the federal
19 Low-Income Home Energy Assistance Program, affordable housing, and
20 affordable medical insurance and costs.

¹⁶ DAAO witness Makhijani direct testimony, p 56 -57

1 If the Commission chooses to accept this recommendation, Staff notes that any
2 process exploring the applicability of non-energy benefits in affordability should
3 be considered consistently across the regulatory environment and not just
4 considered in this instant case alone. A process which likely would require
5 additional data collection, analysis, and interested parties' engagement and could
6 ensure a uniform approach across investor-owned utilities.

7 Q. What is the third recommendation by DAAO witness Makhijani you are
8 responding to?

9 A. In his third recommendation in direct testimony, DAAO witness Makhijani asks
10 the Commission to "devote resources to quantifying and tracking non-energy
11 benefits experienced by those whose energy has become affordable, especially
12 among those who now have very high energy burdens (above 15%) and also those
13 experienced by society in the form of reduced costs of social and medical
14 services."¹⁷

15 Q. What is your response to DAAO witness Makhijani's recommendation?

16 A. As stated previously, quantifying and tracking non-energy benefits is complex
17 with no accepted methodology for standardizing quantification or tracking. The
18 process mostly likely would require additional data collection, analysis, and
19 interested parties' engagement and may not yield timely or actionable results. If
20 the Commission chooses to accept this recommendation, Staff recommends that it
21 be linked to any process for understanding non-energy benefits in affordability.

¹⁷ DAAO witness Makhijani direct testimony, p 56

- 1 | Q. Does this conclude your rebuttal testimony?
- 2 | A. Yes.

1 MR. ORRIS: Staff moves to bind in the
2 Rebuttal Testimony of Nicholas M. Evans, consisting of a
3 cover sheet and 15 pages of qualifications, questions and
4 answers Mr. Evans sponsored no rebuttal exhibits and
5 sponsored no direct testimony.

6 JUDGE WALLACE: Thank you. Is there any
7 objection to binding in the rebuttal testimony of Mr.
8 Evans?

9 Hearing none, the testimony is bound in.
10 (Testimony bound in.)

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STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * *

In the matter of the application of	)	
DTE ELECTRIC COMPANY	)	
for authority to increase its rates, amend	)	Case No. U-21534
its rate schedules and rules governing the	)	
distribution and supply of electric energy,	)	
<u>and for miscellaneous accounting authority.</u>	)	

QUALIFICATIONS AND DIRECT TESTIMONY OF
NICHOLAS M. EVANS
MICHIGAN PUBLIC SERVICE COMMISSION

July 26, 2024

1 Q. Please state your full name and business address for the record.

2 A. My name is Nicholas M. Evans (he/him/his), and my business address is 7109 West
3 Saginaw Highway, Lansing, Michigan 48917.

4 Q. By whom are you employed and in what capacity?

5 A. I am employed by the Michigan Public Service Commission (MPSC or Commission) as
6 Manager of the Electric Operations Section. This section is part of the Energy
7 Operations Division, which is responsible for ensuring safe, reliable, and accessible
8 energy supplies.

9 Q. Please describe your educational background.

10 A. I earned a Bachelor of Science in Electrical Engineering from Kettering University in
11 2005. In addition, I earned a Master of Public Administration degree from Western
12 Michigan University in 2012.

13 Q. What is your professional background?

14 A. In 2007, I began working at the State of Michigan Energy Office as a staff engineer,
15 where I performed energy audits on local government, school district, and state office
16 buildings and advised the building managers and other personnel on ways to conserve
17 energy and increase their buildings' energy efficiency. I also reviewed energy audits
18 from private contractors for these customers.

19 In April 2010, I began working for the MPSC in the Energy Efficiency Section as
20 a Public Utilities Engineer. In this Section, I reviewed filings made in the reconciliation
21 process of utility Energy Optimization plans. I was the case coordinator for Staff for six
22 electric cooperatives' cases and for Case Nos. U-16013 and U-16014. In addition, I

1 participated in the MPSC Energy Optimization Collaborative and the MPSC Plug-in
2 Hybrid Electric Vehicle Task Force.

3 In 2010, I was placed into the Smart Grid Section where I reviewed the portions
4 of utility rate case filings that pertained to Smart Grid, Advanced Metering Infrastructure
5 (AMI) and Automated Meter Reading (AMR). I testified in several rate cases on AMI
6 issues. I also assisted in writing the Staff Report in Case No. U-17000 and was a member
7 of the MPSC Smart Grid Collaborative.

8 In 2013, I transferred to the Generation and Certificate of Need Section. My
9 primary responsibility was to review expenditures related to environmental compliance
10 and the purchase of new fossil generation in utility rate case filings. My other
11 responsibilities were to review portions of Certificate of Necessity applications and assist
12 with tracking and monitoring various environmental rules as they were proposed and
13 finalized. In 2017, I led two workgroups as part of the Integrated Resource Plan
14 Statewide Parameter Setting/Modeling stakeholder outreach process.

15 In 2017, I was promoted to a Public Utilities Engineering Specialist and began
16 working in the Electric Operations section. My primary responsibilities were to review
17 distribution system expenditures and expenses in utility rate case filings and co-lead the
18 Interconnection Standards and Worker Safety workgroup, which was tasked with
19 updating Michigan's interconnection, distributed generation, and legally enforceable
20 obligation rules. My other responsibilities were to review distribution operations five-
21 year plans, log safety incidents associated with utility equipment, assist with
22 investigations, and assist with updating the Service Quality and Reliability Standards for
23 Electric Distribution Systems rules and the Technical Standards for Electric Service rules.

1 In 2020, I was promoted to Manager of the Electric Operations Section. As
2 manager, I continue to review utility rate case filings, and I regularly assist with various
3 Commission initiatives. I also serve as a point of contact for utilities when safety
4 incidents associated with utility equipment occur. Since 2020, I have been participating
5 in the MPSC's Diversity, Equity, and Inclusion (DEI) initiative. In 2022, I began
6 assisting with the oversight of the third-party review of the electric distribution systems
7 of Consumers Energy and DTE Electric, required by the October 5, 2022 order in Case
8 No. U-21305. In 2023, I began participating in the Financial Incentives and
9 Disincentives workgroup, which was established in Case No. U-21400 and is tasked with
10 reviewing and considering issues related to the creation of financial incentives and
11 penalties involving outages and distribution performance.

12 Q. Have you received any work-related training since starting your employment with the
13 MPSC?

14 A. Yes. I have attended the following programs hosted by the Institute of Public Utilities at
15 Michigan State University: Forecasting for Regulators, Annual Regulatory Studies
16 Program, Advanced Regulatory Studies Program, Michigan Forum on Economic
17 Regulatory Policy, Introduction to Public Utility Regulation and Ratemaking, and the
18 IPU Ratemaking Course.

19 Q. Have you attended any other training programs or events since 2007?

20 A. Yes. Since 2007, I have attended training programs and events on energy auditing, smart
21 grid applications, electric generation, environmental compliance, root cause analysis,
22 asset management, diversity, equity, incident command and management, distributed

energy resources, and electric distribution. Programs and events focused on electric distribution include the following:

-Distribution Efficiency Planning and Voltage Optimization conference sponsored by EUCI, in 2012.

-Distribution Systems and Planning, hosted by NARUC, Organization of MISO States, and Lawrence Berkley National Laboratory, in 2018.

-Fundamentals of Overhead Distribution Systems, presented by EUCI, in April 2023.

-Underground Electrical Distribution Fundamentals, presented by EUCI, in April 2023.

-Electrical Distribution Safety, presented by EUCI, in May 2023.

-Electricity 101, presented by EUCI, in June 2023.

-PBR for Energy Utilities, presented by NARUC Regulatory Training Initiative, in October 2023.

Q. Have you been awarded any certificates as a result of your regulatory training?

A. Yes. In 2014, I was awarded a Tier One Certificate of Continuing Regulatory Education from the Institute of Public Utilities at Michigan State University. In July 2022, I completed the Michigan Infrastructure Council Asset Management Champion Program.

Q. Have you previously testified before the Commission?

A. Yes. I have filed testimony in the following cases:

<u>Case No</u>	<u>Company</u>	<u>Type of Case</u>	<u>Subject of Testimony</u>
U-16180	Indiana-Michigan	Electric rate (settled)	gridSMART sm project
U-16472	Detroit Edison	Electric rate	AMI, SmartCurrents
U-16794	Consumers Energy	Electric rate	AMI/Smart Grid
U-16999	MichCon	Gas rate (settled)	AMI and AMR
U-15768	Detroit Edison	Remand – Electric rate	AMI pilot program

1	U-17087	Consumers Energy	Electric rate (settled)	AMI
2	U-17429	Consumers Energy	Certificate of Necessity	Thetford Plant- IRP
3			(withdrawn)	review
4				
5	U-16472	DTE Electric	Remand – Electric rate	AMI (with Rebuttal)
6	U-17735	Consumers Energy	Electric rate	Environmental capital
7				and O&M, Jackson
8				Plant
9				
10	U-17990	Consumers Energy	Electric rate	Environmental capital
11				and O&M
12				
13	U-18224	Upper Michigan	Certificate of Necessity	RICE Units –
14		Energy Resources		Environmental review
15		Corporation		
16				
17	U-18322	Consumers Energy	Electric rate	Environmental capital
18				and O&M
19				
20	U-18370	Indiana-Michigan	Electric rate	Contingency and SCR
21	U-20162	DTE Electric	Electric rate	Distribution capital
22				and O&M
23				
24	U-20561	DTE Electric	Electric rate	Distribution capital
25				and O&M
26				
27	U-20697	Consumers Energy	Electric rate	Distribution capital
28				and O&M
29				
30	U-20963	Consumers Energy	Electric rate	Distribution capital
31				and O&M (with
32				Rebuttal)
33				
34	U-20836	DTE Electric	Electric rate	Distribution system
35				programs, Vehicle
36				Fleet, outage credits
37				
38	U-21224	Consumers Energy	Electric rate	IT project, service
39				restoration, advanced lighting
40				controls
41				
42	U-21286	Upper Peninsula	Electric rate	Overhead-to-underground
43		Power Company		projects

U-21297	DTE Electric	Electric rate	Distribution capital, undergrounding, IT projects
U-21389	Consumers Energy	Electric rate	Distribution deferral mechanism, Investment Recovery Mechanism
U-21461	Indiana-Michigan	Electric rate	IIJA grant funding, grant writing costs, outage credits

Q. Have you provided technical assistance in any other cases?

A. Yes, in multiple cases:

<u>Case No.</u>	<u>Company</u>	<u>Type of Case</u>	<u>Assisted with:</u>
U-17053	Detroit Edison	Tariff	Non-transmitting meter provision
U-15645	Consumers Energy	Remand – Electric rate	AMI pilot program.
U-18462	Northern States Power	Electric rate (settled)	Distribution system capital and O&M
U-21045	Alpena Power Company	Electric rate (settled)	Distribution capital and O&M
U-21097	Northern States Power	Electric rate (settled)	Distribution capital
U-21138	Consumers Energy	Complaint (withdrawn)	Distribution system operations

1 Q. What is the purpose of your testimony in this proceeding?

2 A. The purpose of my testimony is to present the Michigan Public Service Commission
3 Staff's (Staff) recommendations regarding DTE Electric Company's (DTE Electric or the
4 Company) proposals to recover certain outage credits paid to customers and to expand
5 the duration and scope of the Infrastructure Recovery Mechanism (IRM).

6 Q. Are you sponsoring any exhibits?

7 A. No.

8 **Outage Credits**

9 Q. What is the Company proposing regarding cost recovery of customer outage credits in the
10 instant case?

11 A. The Company's position regarding credits paid for outages that exceed the duration limits
12 in service quality rules R 460.744 and R 460.745 is that these credits should be
13 recoverable from ratepayers when the outage was caused by the transmission operator,
14 another utility, public interference, or animal interference. The Company's position
15 regarding credits paid to customers for exceedance of the outage frequency limit in
16 service quality rule R 460.746 is that a portion of the total credits provided to ratepayers
17 as a whole under this rule should be recoverable, and this portion would correspond to
18 outages caused by the transmission operator, another utility, public interference, animal
19 interference, ice, lightning, wind, or other weather.

20 The Company proposes to recover the outage credit costs by deferring the costs
21 related to credits eligible for recovery, starting after an order in the instant case. The
22 deferred amounts would be reviewed for reasonableness and prudence in the next general
23 electric rate case. Once the deferred amounts are approved by the Commission the

1 Company begin amortizing and recovering them. This proposed recovery treatment is
2 very similar to what the Company proposed in U-20836.

3 Q. Does Staff agree with this proposal?

4 A. Not all of it. While Staff agrees with deferring the costs related to credits eligible for
5 recovery, Staff's position is that recovery should be far more limited than what DTE
6 Electric has proposed.

7 For credits paid for outages that exceed the duration limit, only those outages
8 caused by a transmission operator or another utility should be recovered from ratepayers.

9 For credits paid to customers for exceedance of the outage frequency limit, the
10 recoverable portion of the total credit amount provided to ratepayers should correspond
11 only to outages caused by the transmission operator, another utility, or public
12 interference. For example, let's assume that 150,000 residential customers will receive
13 credits for experiencing 6 sustained interruptions in 2024, consistent with the language of
14 Rule 460.746. The total credit amount provided should be \$5,700,000, as the current bill
15 credit at the time of this filing is \$38. (Commercial customers and industrial customers
16 can also receive credits, but for the sake of simplicity, this example only includes
17 residential customers. In addition, I am assuming that the bill credit amount does not get
18 updated in September and stays at \$38 for the entire year.) Let's further assume that each
19 customer who receives a credit experienced exactly 6 outages over the course of the year,
20 which corresponds to 900,000 outages total for this group of customers. After some
21 analysis in early 2025, the Company finds that 20% of those outages were caused by the
22 transmission operator, another utility, or public interference. In this case, the Company

1 should only recover from ratepayers 20% of the \$5,700,000 paid out, or \$1,140,000. The
2 remaining 80%, or \$4,560,000, would be borne by shareholders.

3 Q. Is this methodology similar to the Company's initial proposal?

4 A. Yes, based on the testimony of Company witness Adella Crozier, who states on page 34
5 of her direct testimony:

6 **Q47. Does the Company have a proposal for how recoverable credits related to**
7 **frequent outages would be calculated?**

8 A47. The Company would like to spend more time with Staff to design a methodology
9 for the recovery of these credits but has an initial proposal. If a customer meets the
10 criteria for the outage credit based on outage frequency, there will likely be a mix of
11 underlying causes. Though mathematically simple to determine the percentage of the
12 outage credit that is recoverable, it will be expensive and complicated to implement an
13 algorithm into the billing system to calculate a unique percentage to apply to each \$38
14 credit that is being deferred for recovery. The Company proposes that a common
15 percentage be applied to all outage credits paid for outage frequency exceedances that
16 reflects some analytics from the previous year. In this way, a simple and consistent factor
17 can be applied to each outage credit paid for frequency exceedances, avoiding the need
18 for complicated and costly system programming.

19
20 It would be less costly to analyze the prior year's data and apply a common percentage
21 than to analyze each payment real-time and apply a unique factor. The Company would
22 like to work with Staff to develop a methodology that is reasonable and able to be
23 implemented without billing system complexities.
24

25 Q. Is Staff open to collaborating with the Company and other intervenors after the
26 conclusion of this rate case on finalizing the methodology for the recovery of repetitive
27 outage credits, if necessary?

28 A. Yes.

29 Q. Why does Staff oppose recovery of long-duration outage credits for outages caused by
30 public interference and animal interference?

31 A. Staff's position is that the Company recover from ratepayers only those outage credits
32 that are paid out due to outages that are outside the control of the Company to resolve.

33 An outage caused by the transmission system operator or another utility clearly falls

1 within this category. However, under Staff's position, credits paid out due to events such
2 as a car hitting a DTE Electric-owned pole or an animal damaging equipment could not
3 be recovered from ratepayers, because restoring customers in a timely manner after car-
4 pole accidents or other public interference and animal interference is an expected utility
5 function.

6 Q. Why does Staff oppose recovery of repetitive outage credits for outages caused by animal
7 interference, ice, lightning, wind, and other weather?

8 A. Staff's position is that the Company recover from ratepayers only those outage credits
9 that are paid out due to outages that are completely outside the control of the Company to
10 prevent. An outage caused by the transmission system operator, another utility, or public
11 interference clearly falls within this category. However, under Staff's position, credits
12 paid out due to events such as an animal damaging equipment or a storm could not be
13 recovered from ratepayers, because the utility should be hardening or otherwise
14 upgrading its distribution system to reduce or eliminate the occurrences of these types of
15 outages.

16 **Infrastructure Recovery Mechanism**

17 Q. Please describe DTE Electric's proposed infrastructure recovery mechanism (IRM).

18 A. In Case No. U-21297, the Company proposed IRM treatment for five distribution capital
19 programs:

20 1) Conversions;

21 2) Subtransmission Redesign and Rebuild;

22 3) Breaker Replacement;

23 4) Underground Residential Distribution (URD) Replacement; and

1 5) 4.8 kV Circuit Automation.

2 The IRM would be in place for just over three years:

3 -IRM Plan Year 1 would cover December 1, 2023 – December 31, 2024;

4 -IRM Plan Year 2 would cover January 1, 2025 - December 31, 2025; and

5 -IRM Plan Year 3 would cover January 1, 2026 – December 31, 2026.

6 The Company proposed that two stakeholder processes, the IRM Planning Process and
7 the IRM Reconciliation Process, be part of the IRM. Company witness Neal Foley
8 describes these processes on page 5 of his direct testimony in the instant case.

9 Q. What did the Commission approve in its December 1, 2023 order in Case No. U-21297?

10 A. The Commission approved the Company's proposed IRM with several modifications.

11 For the purposes of my testimony, I will only list and describe the modifications that are
12 relevant to my recommendations.

13 -The Company shall submit its annual IRM Investment Plan no later than four months
14 prior to the start of each IRM Plan Year, and the Plan must be submitted to all
15 intervening parties in the Company's most recently filed general rate case.

16 -The Company shall schedule and provide a forum, no later than two months before the
17 start of the IRM plan year, for Staff and intervening parties to ask questions or raise
18 concerns about the plan.

19 -Only years 1 and 2 were approved. In other words, absent an extension granted by the
20 Commission, the current IRM will expire at the end of 2025.

21 Q. Is the Company asking for the IRM to be modified in the instant case?

22 A. Yes, the Company is asking for four modifications to the current IRM in this case:

23 1. Extend the IRM through calendar years 2026 and 2027.

2. Starting in 2026, Pole and Pole Top Maintenance and Modernization (PTMM) should be authorized for IRM treatment.

3. Starting in 2026, the scope of the automation program be modified from “4.8 kV Circuit Automation” to “Distribution Automation.”

4. Include \$434,100,000 in additional capital expenditures to the IRM for 2025.

This amount is spread across four programs:

Distribution Automation- an additional \$125.6 million;

PTMM - \$121 million;

4.8 kV Hardening - \$125 million; and

Frequent Outage Management (CEMI) - \$62.5 million.

If the Commission were to authorize, in full or in part, those capital programs and associated investment amounts for IRM treatment in 2025, the capital expenditures would have to be removed from the Company’s base rate recovery request.

Q. Does Staff support these proposed modifications?

A. Only one of them. Staff supports modifying the scope of “4.8 kV Circuit Automation” to “Distribution Automation” after the conclusion of IRM Plan Year 2.

Q. What proposed modifications to the IRM does Staff not support?

A. -Staff does not support extending the IRM through calendar years 2026 and 2027.

-Since Staff does not support extending the IRM through calendar year 2026 and 2027, Staff cannot support authorizing Pole and Pole Top Maintenance and Modernization (PTMM) be authorized for IRM treatment, starting in 2026.

1 -For 2025, Staff does not support increasing the distribution automation investment from
2 \$24.4 million to \$150 million for inclusion in the IRM. Also for 2025, Staff does not
3 support adding \$121 million in PTMM investment, \$125 million in 4.8 kV hardening,
4 and \$62.5 million in Frequent Outage Program (CEMI) investment to the IRM.

5 Q. Please explain why Staff does not support these changes.

6 A. As the Commission stated on page 289 of its December 1, 2023 order in the Company's
7 last electric rate case, Case No. U-21297:

8 [T]he Commission finds that approval is limited to Plan Years 1 and 2. As noted on
9 the record, there is ongoing discussion regarding PBR in Case No. U-21400 and an
10 ongoing audit in Case No. U-21305. Therefore, the Commission finds that limiting the
11 approval to the first two years will allow the company to move forward with the IRM
12 without precluding the incorporation of any potential insights gained from those
13 proceedings to better inform the potential continuation of the IRM.

14
15 Staff does not want to have the Company locked into spending specific amounts
16 in those IRM programs for all of 2026 and 2027, and further increase the IRM spending
17 in 2025, when the U-21305 audit report, authored by the Liberty Consulting Group, will
18 be finished sometime in late summer or the fall, and the Commission may issue an order
19 in Case No. U-21400 regarding financial incentives and disincentives. The Liberty audit
20 report may have recommendations that could cause DTE Electric to change spending
21 amounts and programs included in the IRM. Company witness Neal Foley says as much
22 on page 16 of his direct testimony:

23 [F]uture IRM proposals would incorporate the recommendations from the
24 Distribution System Audit where appropriate. For example, while the Company
25 cannot predict what those recommendations will be, it is possible that the
26 Company may propose changes to either the programs or the investment levels
27 authorized for IRM treatment based on Liberty Consulting Group's findings.

28
29 Staff's position is that it is far better to have DTE Electric review the audit report
30 later this year and next year and then make adjustments, where appropriate, to potential

2026 IRM spending and programs, rather than risk being locked into inefficient spending for 2026.

Q. Please describe the Company's concerns with only approving the IRM for two years as opposed to four.

A. According to Company witness Neal Foley, on page 10-11 of his direct testimony:

Absent an extension granted in this case, the existing IRM will cease at the end of 2025 and could only be re-established through a Commission order in a future case. Such stopping and restarting of the IRM and its associated processes could lead to inefficiencies and reduce the ability to improve upon the process through stakeholder feedback. Importantly, the proposed extension will ensure that the customer and stakeholder benefits realized through the IRM do not lapse.

Q. What does Mr. Foley mean by "stopping and restarting"?

A. I will provide a hypothetical scenario to illustrate what Mr. Foley is referring to. Assume the Company files a rate case next year, on June 2, 2025, with an order issued the following year on April 1, 2026. As part of this order, a revised IRM, incorporating to some degree the Liberty audit findings, is authorized for the remainder of 2026. Since the IRM had expired on December 31, 2025, this reauthorization would bookend a three-month gap from January 1, 2026 – April 1, 2026 where no IRM was in effect. This is how "stopping and restarting" can happen with an IRM.

Q. Does Staff have any concerns with a gap occurring in the IRM?

A. No. Strictly from a process standpoint, a gap can be accommodated. Using the scenario described above, the Company would receive the results of the Liberty audit later in 2024, incorporate findings as appropriate into the partial year 2026 and likely calendar year 2027 IRM Plans, and then include those plans and the IRM authorization requests in the rate case filed on June 2, 2025. Knowing that an order would be issued around April 1, 2026, and assuming that the 2026 IRM Plan Year would start that same day, the

1 Company could send the Partial Year 2026 IRM Investment Plan out to Staff and
2 intervenors on December 1, 2025, and then schedule the forum on or before February 1,
3 2026.

4 Again, it is better to pause the IRM for part of 2026 to allow for more efficient
5 spending in 2026 and 2027 than to authorize in this rate case 2026 and 2027 IRM plans
6 that may have already been rendered outdated by the Liberty audit report in U-21305 and
7 a Commission order in U-21400 on financial incentives and disincentives.

8 Q. Please summarize your recommendations.

9 A. My recommendations are as follows:

10 1. For outage credits paid for outages that exceed the duration limit, only those
11 outages caused by a transmission operator or other utility should be recovered from
12 ratepayers.

13
14 2. For outage credits paid to customers for exceedance of the outage frequency limit,
15 the recoverable portion of the total credit amount provided to ratepayers as a whole
16 should correspond to outages caused by the transmission operator, another utility, or
17 public interference.

18
19 3. Staff does not support extending the IRM through calendar years 2026 and 2027.

20
21 4. For 2025, Staff does not support increasing the distribution automation
22 investment from \$24.4 million to \$150 million for inclusion in the IRM. Also for 2025,
23 Staff does not support adding \$121 million in PTMM investment, \$125 million in 4.8 kV
24 hardening, and \$62.5 million in Frequent Outage Program (CEMI) investment to the
25 IRM.

26
27 Q. Does this conclude your direct testimony?

28 A. Yes.

1 MR. ORRIS: That completes Staff's case.

2 JUDGE WALLACE: All right. Off the
3 record for a second.

4 (At 12:52 p.m., off-record discussion.)

5 JUDGE WALLACE: All right. Back on the
6 record.

7 MR. JANISZEWSKI: Thank you, your Honor.
8 O.K. The Company would like to make a few clarifications
9 regarding testimony and exhibits that were bound in and
10 admitted into the record earlier today. First, the
11 Qualifications and Direct Testimony of Kurt -- Kirk M.
12 Vangilder, consisting of a cover sheet and 21 pages of
13 questions and answers. That was referred to as revised
14 direct testimony, it should not have been referred to as
15 revised. It was never revised, so it was just the direct
16 testimony of Mr. Vangilder.

17 Secondly, the Rebuttal Testimony of
18 Jerome K. Hooper, consisting of a cover sheet and 13
19 pages of questions and answers that was bound into the --
20 I'm sorry. The rebuttal testimony of Mr. Hooper was
21 referred to as consisting of 15 pages of questions and
22 answers, it should have been 13 pages of questions and
23 answers.

24 And then the last clarification is the
25 Michael J. Hastios's Rebuttal Exhibit A-44 should be

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1 properly referenced as Schedule III1. And that is all the
2 clarifications we have. I appreciate it.

3 JUDGE WALLACE: O.K. Instead of EE1, it
4 should have been III1. O.K. All right. Does anybody
5 else have anything, and remember, you've got five or
6 seven days from the time the transcript goes up to make
7 any clarifications or changes to that, although Lori
8 pretty much gets it right the first time, so what you
9 said would be accurately reflected in the transcript.

10 All right. I will send you guys an email
11 with some instructions concerning briefing, and this is,
12 you know, on behalf of the Commission who's reading the
13 record in this case, so look for that email to come
14 today. I think I'll be able to tell you everything I
15 need to tell you in one email.

16 And other than that, do we have anything
17 further we need to take up before we close the record?

18 MR. BZDOK: No. Just thank you, your
19 Honor.

20 JUDGE WALLACE: And thank all of you,
21 this was very, not too bad. Didn't go on for too long.

22 MS. DURIAN: Thank you.

23 MR. JANISZEWSKI: Yeah, thank you, your
24 Honor.

25 JUDGE WALLACE: You're welcome.

1 MR. JANISZEWSKI: Thank you, Ms. Penn, as
2 well.

3 JUDGE WALLACE: All right. Well, it's
4 1:00 o'clock, or almost 1:00 o'clock, so we're done and
5 we're off the record, and thank you all very much.

6 (Collective "Thank you.")

7 (At 12:57 p.m., the hearing concluded.)

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C E R T I F I C A T E

I, Lori Anne Penn (CSR-1315), do hereby
certify that I reported in stenotype via Microsoft Teams
the proceedings had in the above-entitled matter, that
being Case No. U-21534, before Sally L. Wallace, J.D.,
Administrative Law Judge with Michigan Office of
Administrative Hearings and Rules, for the Michigan
Public Service Commission, Lansing, Michigan, on Tuesday,
September 10, 2024; and do further certify that the
foregoing transcript, consisting of Volume 6 PUBLIC
RECORD, pages 1394-5241, constitutes a true and correct
transcript of my stenotype notes.

Lori Anne Penn

Lori Anne Penn, CSR-1315
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Dated: September 24, 2024

(Transcript continues on Page 5242 of the
Confidential Record.)

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