VARNUM
ATTORNEYS AT LAW

201 North Washington Square | Suite 910
Lansing, Michigan 48933
Telephone 517 / 482-6237 | Fax 517 / 482-6937 | www.varnumlaw.com

Laura A. Chappelle lachappelle@varnumlaw.com

December 23, 2020

Ms. Lisa Felice
Executive Secretary
Michigan Public Service Commission
7109 W. Saginaw Highway
P.O. Box 30221
Lansing, MI 48909

Re: MPSC Case No. U-20713 and U-20851 consolidated

Dear Ms. Felice:

Attached for electronic filing in the above-referenced matter, please find Direct Testimony and Exhibits of Dr. Laura Sherman and Caitlin Marquis filed on behalf of Michigan Energy Innovation Business Council, Institute for Energy Innovation, and Advanced Energy Economy. Thank you for your assistance in this matter.

Very truly yours,

VARNUM

Laura A. Chappelle

LAC/sej
Enclosures
c. ALJ
All parties of record.
17354273.1

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

****

In the matter, on the Commission's own motion, regarding the regulatory reviews, revisions, determination and/or approvals necessary for regulated electric providers to comply with Section 61 of 2016 PA 342.	)	Case No. U-20713
In the matter, on the Commission's own motion, regarding the regulatory reviews, revisions, determination and/or approvals necessary to fully comply with Public Act 295 of 2008.	)	Case No. U-20851 Consolidated

DIRECT TESTIMONY OF
DR. LAURA SHERMAN
ON BEHALF OF
THE MICHIGAN ENERGY INNOVATION BUSINESS COUNCIL,
INSTITUTE FOR ENERGY INNOVATION,
AND
ADVANCED ENERGY ECONOMY

Q. State your name, business name and address.

A. My name is Laura Sherman and I am the President of the Michigan Energy Innovation Business Council ("Michigan EIBC") and the Institute for Energy Innovation ("IEI"), located at 115 West Allegan, Suite 710, Lansing, Michigan 48933.

Q. On whose behalf are you appearing in this case?

A. I am appearing here as an expert witness on behalf of Michigan EIBC, IEI, and Advanced Energy Economy ("AEE"), collectively referred to as "Michigan EIBC/IEI/AEE."

Q. Summarize your educational background.

A. I have a Ph.D. from the University of Michigan Earth and Environmental Sciences Department, conferred in May 2012. I also have a Bachelor of Science degree from Stanford University in Geological and Environmental Sciences, conferred in June 2005.

Q. Summarize your experience in the field of electric utility regulation.

A. Since April 2019, I have served as the President of Michigan EIBC and IEI. Prior to that, starting in February 2017, I was a senior consultant at 5 Lakes Energy focusing on energy policy and utility regulation and I also served as the Vice President for Policy Development for the Michigan EIBC and IEI. In these capacities, I have written testimony in many non-adjudicated dockets before the Michigan Public Service Commission ("Commission" or "MPSC"). From 2014-2016, I served as an energy policy advisor to Senator Michael Bennet (D-CO) in the U.S. Senate. In that capacity, I provided policy expertise, conducted research, developed legislation, and analyzed regulations. Prior to that, my doctoral (2007-

2012) and postdoctoral (2012-2014) research was focused on the tracing of pollutants emitted during energy generation. My work experience is set forth in detail in my résumé, attached as Exhibit EIB-1 (LSS-1).

Q. Summarize your professional development coursework in the field of electric utility regulation.

A. In August 2017, I completed the EUCI course titled "Optimizing the Interconnection Process for Renewables & Storage: A National Forum for Addressing Process and Technical Issues." In December 2017, I completed the EUCI course titled "The Electric Vehicle-Utility Industry Nexus." In January 2018, I completed the EUCI course titled "Evolution of Electricity Markets: Disruptive Innovation & Economic Impacts: Highly Interactive Course Designed to Provide A Practical Overview of Evolving U.S. Power Markets."

Q. Have you testified before this Commission or as an expert in any other proceeding?

A. Yes. I previously testified as an expert witness in Case No. U-20134 (Consumers Energy general rate case), Case No. U-20165 (Consumers Energy Integrated Resource Plan case), Case No. U-20162 (DTE Electric general rate case), Case No. U-20471 (DTE Electric Integrated Resource Plan case), Case No. 18232 (DTE Electric Renewable Energy Plan case), and Case No. U-20649 (Consumers Energy Voluntary Green Pricing Program case).

Q. Have you provided analysis in support of testimony or comments in any other utility regulatory proceeding?

A. Yes. In my roles at Michigan EIBC and IEI, from July 2017 through July 2018, I supported and reviewed filings made on behalf of the Michigan EIBC/IEI/AEE in Commission Case Nos. U-18351 and U-18352, focused on the creation of the voluntary green pricing programs. In March 2018, with input from Michigan EIBC member companies, I provided comments in Commission Case No. U-20095, focused on the Public Utility Regulatory Policies Act of 1978 ("PURPA") regulations and capacity determinations. In March and April 2018, with input from Michigan EIBC member companies, I provided comments and reply comments in Commission Case No. U-18383, focused on the development of a distributed generation tariff. In June 2018, with input from Michigan EIBC member companies, I provided comments in Commission Case No. U-18361, focused on the development of new code of conduct rules. In October 2018, with input from Michigan EIBC member companies, I provided comments in Commission Case No. U-20147 regarding the Commission Staff report on distribution system planning. Similarly, in March 2020, with input from Michigan EIBC member companies, I provided comments in Commission Case No. U-20147 regarding the updated Commission Staff draft report on distribution system planning. In November 2020, with input from Michigan EIBC member companies, I provided comments in Commission Case No. U-20905 regarding the implementation of FERC Order 872 in Michigan. In addition to this work, I have been involved on behalf of 5 Lakes Energy and Michigan EIBC in multiple workgroup proceedings at the Commission, including those focused on the distributed generation tariff, Integrated Resource Plan requirements, energy waste reduction, and distribution

system planning. Over the last year, I have been involved on behalf of Michigan EIBC/IEI/AEE in the MI Power Grid workshop proceedings at the Commission including those focused on updating the state's interconnection rules, demand response, distribution system planning, pilot programs, competitive procurement, and advanced planning.

Q. Summarize your experiences working with advanced energy companies on issues related to electric utility regulation.

A I have served as the President of Michigan EIBC and IEI since April 2019. Prior to that, from November 2017 through April 2019, I served as Vice President of Policy Development for Michigan EIBC and IEI. In these roles, I have led the trade organization's work on regulatory and legislative issues. As described above, I have participated in many workgroups at the Commission and written comments in a number of non-adjudicated cases. I also communicate formally and informally with Michigan EIBC member companies about each regulatory proceeding to understand how the advanced energy industry is affected by each proposed rule or case. Specifically, as it relates to this case, I coordinated Michigan EIBC/IEI's intervention in Consumers Energy's and DTE Electric Company's Voluntary Green Pricing cases (Case No. U-18351 and U-18352, respectively). Throughout these cases, I engaged with Michigan EIBC members to understand the potential impact of the proposed programs on the advanced energy industry and best practices from other states. This perspective, in addition to my training and education, enables me to speak with authority in this case regarding several aspects of DTE Electric Company's ("DTE," "DTE Electric," or the "Company") proposed MIGreenPower Voluntary Renewable Energy Program.

Q. Are you sponsoring any exhibits?

A. Yes, I am sponsoring the following exhibits:

1. Exhibit EIB-1 (LSS-1): Résumé of Laura Sherman.
2. Exhibit EIB-2 (LSS-2): DTE Discovery response to Michigan EIBC, IEI and AEE; EIBCIEIAEEDE-1.2a
3. Exhibit EIB-3 (LSS-3): DTE Discovery response to Michigan EIBC, IEI and AEE; EIBCIEIAEEDE-1.7a
4. Exhibit EIB-4 (LSS-4): DTE Discovery response to Michigan EIBC, IEI and AEE; EIBCIEIAEEDE-1.3a
5. Exhibit EIB-5 (LSS-5): DTE Discovery response to Michigan EIBC, IEI and AEE; EIBCIEIAEEDE-1.6b
6. Exhibit EIB-6 (LSS-6): DTE Discovery response to Michigan EIBC, IEI and AEE; EIBCIEIAEEDE-1.4ai
7. Exhibit EIB-7 (LSS-7): DTE Discovery response to Michigan EIBC, IEI and AEE; EIBCIEIAEEDE-1.1a
8. Exhibit EIB-8 (LSS-8): DTE Discovery response to Michigan EIBC, IEI and AEE; EIBCIEIAEEDE-1.1c
9. Exhibit EIB-9 (LSS-9): Affidavit of Allen Reese, Director of Development for Pine Gate Renewables.
10. Exhibit EIB-10 (LSS-10): Exhibit 7, "New or Upgraded Purchased Power," Consumers Energy Company ("Consumers" or "Consumers Energy"), Case No. U-20886, dated December 1, 2020.

Q. What is the purpose of your Direct Testimony?

A. The purpose of my Direct Testimony is to describe, based on my experiences as the President of Michigan EIBC and IEI, and based on conversations with Michigan EIBC member companies, concerns and suggestions regarding DTE Electric's proposed "customer-requested project offering," renewable energy build, and competitive solicitation for small-scale solar or solar plus storage projects.

Customer-Requested Project Offering

Q. Please describe the customer-requested project offering proposed by DTE Electric.

A. According to Witness Calka,

> DTE Electric is currently in discussions with several large customers interested in partnering with the Company to design and construct location-specific community-solar projects to help them achieve their respective sustainability aspirations. These projects are one-of-a-kind projects with unique design criteria based on customer input that do not fit within the currently-structured Rider 17 and Rider 19 offerings.[1]

Witness Calka goes on to describe that the costs for each project "will be allocated to the participating customer(s) for the life of the project . . ."[2]

Q. How does the Company propose to limit participation for the customer-requested offering?

A. According to Witness Calka, any and all commercial or industrial customers of DTE Electric are eligible to participate in the customer-requested offering. Specifically, Witness

[1] Direct Testimony of Brian T. Calka, Case No. U-20713, dated August 31, 2020 ("Calka Direct), p. 23.

[2] Calka Direct, p. 24.

Calka testified that, "[A]s an initial matter, any commercial or industrial customer is eligible, in that no customers are prohibited from proposing a locally-sited project."[3]

Q. Have you learned anything further about the proposed customer-requested project offering?

A. Yes. I have had several conversations about the customer-requested project offering with representatives from DTE Electric, including Charles Conlen, Brian Calka, and Lauren Donofrio. Based on those conversations, I understand that the Company has been contacted by several municipal, commercial and industrial customers interested in "on-site" solar projects with specific characteristics (e.g., near the community or on a brownfield site). These requests are both for on-site behind-the-meter projects as well as front-of-the-meter projects. According to Witness Calka in a discovery response to Michigan EIBC/IEI/AEE, "'on-site' refers to a location on land that is contiguous with the customer's premise and that features a DTE Electric meter, or another location on property owned by or leased on behalf of the customer or DTE."[4]

Additionally, although Witness Calka indicates on page 34 of his Direct Testimony that the Company anticipates "executing customer-requested project contracts with municipalities, higher education institutions, and other public-sector entities," in a discovery response to Michigan EIBC/IEI/AEE, Witness Calka indicated that "[the]

[3] Calka Direct, p. 23.

[4] Exhibit EIB-2, LSS-2.

Company has not made the determination to limit participation to municipalities, higher education institutions, and other public-sector entities."[5]

Q. Do you see any potential benefits of the proposed customer-requested project offering for projects that would be located in front of the meter?

A. Yes. An increasing number of corporations, municipalities, and universities in Michigan and across the country are setting sustainability and carbon reduction or renewable energy goals. According to Michigan EIBC/IEI/AEE Witness Caitlin Marquis, in her testimony in Case No. U-20649 earlier this year,

> . . . year-end data shows that 2019 was a record-setting year for corporate renewable energy procurement, with more than 9 GW of deals signed in the U.S.[6] This continues a steady upward trend over the past several years, which has resulted in a total of 22 GW of renewable energy procured by large corporate customers across the U.S. since 2015.[7]

In the current proceeding, according to Witness Calka, DTE Electric predicts that the Rider 19 program for large customers will increase incrementally each year due to "new leads" at a rate of "90,000 MWh of incremental growth each year."[8]

A subset of these large customers, for a variety of reasons, may wish to generate renewable energy at a specific location in front of their electric meter to directly offset their electric

[5] Exhibit EIB-3, LSS-3.

[6] These data include only large-scale offsite renewable energy deals, and therefore undercounts corporate demand for renewable energy overall. Source: https://rebuyers.org/deal-tracker/.

[7] *Id*. Marquis Revised Direct, Case No. U-20649, p. 3.

[8] Calka Direct, p. 30.

loads. For example, a municipality may wish to locate a solar array within the boundaries of the community to provide an educational benefit to residents and as a tangible representation of their commitment to sustainability. A corporation may own a piece of non-adjacent abandoned land or a brownfield property that it wishes to redevelop for renewable energy generation. Unless the industrial customer has a suitable property adjacent to the electricity load they wish to serve (which would enable a behind-the-meter, self-service project under Michigan statute MCL 460.10a(4)(a)), the utility's involvement is necessary to make these front-of-the-meter projects possible.

Q. Do you support the Company's request to offer its proposed customer-requested project offering behind-the-meter?

A. At this time, no, I do not.

Q. What concerns do you have with the proposed customer-requested project offering?

A. Although I do believe that there are potential benefits that may result from certain front-of-the-meter offerings, as outlined above, I am concerned that, as a whole, this customer-requested project offering, as proposed, is too vague and may allow the Company to operate in an unregulated, competitive space (behind-the-meter) and put those assets into the rate base without explicit legislative authority. I am unaware of any legislative authority for such behind-the-meter generation projects, including specifically under the Voluntary Green Pricing Program authorized by Public Act 342 of 2016 ("Public Act 342"), and do not believe that the legislature has expressly considered such authority.

Q. How has DTE responded to this concern?

A. According to a discovery response to Michigan EIBC/IEI/AEE,

> . . . the Company is not proposing, in this case, a particular program. Rather the Company is exploring ways to satisfy requests that its customers are making of it, and some of those requests have included behind-the-meter projects as well as in-front-of-the-meter projects. DTE Electric is not aware of any legislation that prohibits DTE Electric from building, owning and operating a generating unit whether it be behind-the-meter or in-front-of-the-meter, and in fact the Company has previously received Commission approval for behind-the-meter projects it has constructed for its customers, albeit outside the VGP space.[9]

Q. Are you aware of any legislation that expressly authorizes the Company to build, own, and operate an electric generation unit behind-the-meter?

A. No, I am not. This is an unregulated market and to my knowledge, the Michigan legislature has never addressed a regulated utility being able to compete with other unregulated energy providers in this space.

Q. Has the legislature authorized investor-owned utilities to operate in other, specific unregulated markets?

A. Yes. In 2016, Public Act 341 ("Public Act 341") explicitly allowed investor-owned utilities and their affiliates to offer value-added programs and services ("VAPS") in accordance with a new code of conduct.[10] According to the statute,

> The code of conduct shall include, but is not limited to, measures to prevent cross-subsidization, preferential treatment, and, except as otherwise

[9] Exhibit EIB-4, LSS-4.

[10] 2016 PA 341, Sec. 10ee; MCL 460.10ee(1).

> provided under this section, information sharing, between a utility's regulated electric, steam, or natural gas services and unregulated programs and services, whether those services are provided by the utility or the utility's affiliated entities.[11]

Q. Is it your understanding that VAPS would include regulated utility development of generation behind-the-meter?

A. No. I am not aware of any legislative discussions or considerations of behind-the-meter generation development by regulated utilities in the development of the Code of Conduct provision for VAPS,[12] nor has the Company provided any such references.

Q. Why is adherence to the Code of Conduct for VAPS important?

A. After Public Act 341 was signed into law, the Commission instituted a process to develop a Code of Conduct. Michigan EIBC and IEI participated in the stakeholder groups and Commission cases that led to the issuance of the current Code of Conduct in December 2018. Throughout that process, we urged the Commission to ensure that any unregulated VAPS governed by the Code of Conduct maintain the appropriate market and regulatory structures to ensure that the programs function independently, share information in a fair manner to ensure competition, and avoid creating market power conflicts.

The Code of Conduct provides a clear template that governs the interactions and activities of utilities and utility affiliates with and within unregulated markets. Specifically, a utility

[11] *Id*.

[12] 2016 PA 341, Sec. 10ee; MCL 460.10ee.

is not allowed to "offer unregulated value-added programs and services except through an affiliate or other entity within the corporate structure, or through a third-party contract."[13] Additionally, a utility and its affiliate are not allowed to engage in joint advertising or joint selling of regulated and unregulated VAPS.[14] Finally, information that a utility has as part of its regulated business cannot be shared with its affiliates or other entities offering VAPS (e.g., customer-specific information).[15]

For VAPS in cases where competitive markets are functioning and/or could be developed, even an implicit extension of a regulated utility's monopoly position is inappropriate because such an extension could result in the undue restraint of trade or competition in markets served by competitive providers.

Q. Has the legislature provided similar authority and guidelines for the investor-owned utilities to participate in the unregulated behind-the-meter generation market?

A. No. I am unaware of any such legislative authority and do not believe that the legislature has expressly considered such authority. Additionally, such authority was not granted in Section 61 of PA 342 of 2016. As described further below, this is especially concerning for such programs where the utility is able to put renewable generation assets into the rate

[13] Order No. U-18361; R 460.10103(2).

[14] Order No. U-18361; R 460.10106(1).

[15] Order No. U-18361; R 460.10109(3).

base to enable financing of those assets over the lifetime of the asset. As noted by Witness Calka in a discovery response to Michigan EIBC/IEI/AEE, "the Company has previously received Commission approval for behind-the-meter projects it has constructed for its customers, albeit outside the VGP space."[16]

Q. Do you have concerns about the potential authorization for the Company to construct behind-the-meter projects specifically under the Voluntary Green Pricing Program?

A. Yes. I am concerned that the Company, as a regulated monopoly, possesses certain benefits that afford it an unfair competitive advantage over third parties in the unregulated behind-the-meter solar market, especially under programs such as the Voluntary Green Pricing Program.

Because the customer-requested project offering is proposed as a Section 61 Voluntary Green Pricing Program offering, by definition, participating customers would pay all of the costs associated with the offering, but these costs are determined on a levelized per kWh basis over an expected long-term contract. As explained by Witness Calka in a discovery response to Michigan EIBC/IEI/AEE, the Company envisions that contracts under the customer-requested project offering will be of standard term lengths, likely between 20 and 35 years.[17] Practically, this means that the Company will add these solar assets to the rate base and a customer who signs up with the Company for a project under this Section 61 offering will be able to pay back the cost of the installation over a contract term of between

[16] Exhibit EIB-4, LSS-4.

[17] Exhibit EIB-5, LSS-5.

20 and 35 years on their utility bill. No unregulated market participant would be able to provide similarly favorable financing terms and would thereby be unfairly disadvantaged in this unregulated market by the participation of the regulated utility.

Furthermore, as described in more detail below, the Commission has not yet made a determination on how these proposed behind-the-meter installations should be addressed within a utility's rate base. Specifically, in its order establishing the "New Technologies and Business Models" workgroup, the Commission noted that the "Commission has not determined whether or not [owning and rate-basing behind-the-meter resources] is a suitable role for the regulated utility (under VGP or otherwise) . . . ."[18]

Q. Do you have any additional concerns?

A. Yes. The Company has access to customer data that are not provided publicly including, but not limited to, contact information, electricity load data, and information regarding engagement in prior utility programs. This can allow for an unfair advantage in identifying and contacting potential commercial and industrial customers who might be interested in a behind-the-meter solar system.

In addition, I am concerned that third-party developers who have spent significant time and funds identifying potential customers and preparing proposals may lose those customers in a disadvantaged manner to the Company. A third-party developer may, for example, spend

[18] MPSC Order No. U-20898, *In the matter, on the Commission's own motion, to commence a collaborative to consider issues related to implementation of effective new technologies and business models*, dated October 29, 2020 ("Order No. 20898"), p. 4, fn 7.

staff time to educate a potential customer about behind-the-meter solar, model the customer's load and solar needs, and develop a proposal, only to have the customer decide to utilize the utility's financing option through this offering. Of course, it is not expected that a developer will win a contract to build every project that they scope, but in an unregulated market, all competitors should be subject to the same competitive forces and operate on a level playing field. Entry by a regulated monopoly into this market would create an unfair playing field.

Q. Does the fact that this offering is proposed not as a program, but on a strictly case-by-case basis mitigate these concerns?

A. No. None of my concerns as outlined above would be addressed by the case-by-case nature of this offering. As outlined in a discovery response to Michigan EIBC/IEI/AEE, the Company "does not propose to engage stakeholders prior to presenting any customer-requested contracts to the Commission for approval."[19] Given that these contracts would be presented for *ex-parte* approval, it would be very difficult, if not impossible, for stakeholders to review the bid selection process and evaluate a given project each time the utility presents one. As a result, it would be impossible to determine whether or not the utility was being unfairly advantaged in the unregulated behind-the-meter market. Furthermore, once the utility has contracted with the customer and is presenting the agreement to the Commission for approval, competitive providers have already been shut out of the customer's project evaluation process.

[19] Exhibit EIB-6, LSS-6.

Q. How is this proposed customer-requested project offering similar to the "Bring Your Own Bright Field" Program proposed by Consumers Energy in Case No. U-20649?

A. In Case No. U-20649, Consumers Energy proposed a new "Bring Your Own Bright Field" Pilot Program ("Program" or "Pilot"). The Program would have allowed commercial and industrial customers with greater than 1 MW of demand to install Company-owned behind-the-meter solar energy on-site. The customer would have used all of the electricity generated by the solar system on-site and paid a subscription charge for that energy on a levelized per kWh basis.

Although the customer-requested project offering proposed by DTE Electric is not a program and might not, therefore, attract the same number of customers as the proposed Consumers Energy pilot program, the offering proposed by DTE similarly represents entry of a regulated utility into the unregulated behind-the-meter generation market with a rate-based offering. Furthermore, the lack of "program" status for the DTE proposal would conceivably allow the utility to select customers in a manner that would ultimately make it more difficult for competitors to offer proposals in DTE's service territory.

Q. What did the Commission decide regarding the "Bring Your Own Bright Field" Pilot Program in Case No. U-20649?

A. The Commission issued an Order in Case No. U-20649 on September 24, 2020. In that Order, the Commission declined to approve the "Bring Your Own Bright Field" Pilot Program, citing a range of concerns. The Commission wrote:

> However, the Commission has several reservations regarding the BYOBF pilot and finds that approval is not appropriate at this time. The Commission's concerns are as follows: (1) the role of the utility in the behind-the-meter development market, the implications of putting host site solar assets into rate base, and the accounting treatment for the program have not been sufficiently explained or justified; (2) Consumers' agreement to adhere to the Code of Conduct is limited and the Commission finds the nature of the program may warrant additional analysis, especially if any affiliates are involved, and a more thorough consideration of the utility's role in serving a growing, competitive behind-the-meter solar market; and (3) the company stated its intent to use a competitive bidding process to supply the BYOBF pilot but failed to provide any meaningful detail as to the competitive bidding framework.
>
> The Commission finds that additional information and deliberation is needed before the Commission considers approval of the BYOBF pilot or a similarly structured program. The Commission expects to commence additional stakeholder workgroups in the MI Power Grid initiative that are well-suited to explore the potential of this program as well as the implications and to explore the concerns raised by the Commission. The Commission encourages Consumers to present the BYOBF pilot program in the emerging technologies and business models workgroup and work with the Staff and stakeholders to address the concerns raised in this docket. The company is not precluded from re-filing the program in the October 2021 biennial VGP filing with additional detail for the program as well as any revisions or lessons learned from participation in the MI Power Grid initiative.[20]

Subsequent to the issuance of the Order in Case No. U-20649, the Commission issued an order on October 29, 2020, in Case No. U-20898 ("Order U-20898"),[21] that instituted a new stakeholder workgroup within MI Power Grid, entitled the "New Technologies and Business Models" workgroup. The Commission noted in Order U-20898 that with respect to utility engagement in behind-the-meter solar developments:

> In the September 24, 2020 order in Case No. U-20649, pp. 50-56, the Commission declined to approve the Bring Your Own Bright Field program

[20] MPSC Order No U-20649, *In the matter of the application of Consumers Energy Company for approval of Voluntary Green Pricing programs pursuant to Section 61 of 2016 PA 342*, dated September 24, 2020 ("Order No. U-20649"), pp. 55-56.

[21] Order No. 20808, p. 4, fn 7.

> as part of Consumers' voluntary green pricing (VGP) portfolio and provided direction for the Staff, the utility, and stakeholders to discuss (as part of the MI Power Grid initiative) issues related to the utility's role in owning and operating BTM solar. The Bring Your Own Bright Field program, as proposed by Consumers, would have involved the utility facilitating customers' application of BTM solar and potentially battery storage, with the utility owning the equipment as a rate-based asset. *Id*. The Commission has not determined whether or not this is a suitable role for the regulated utility (under VGP or otherwise), what guidelines are necessary should the utility or affiliate be engaged in this activity, or whether this activity is appropriate as a value-added service pursuant to MCL 460.10ee.[22]

Q. What aspects of the Orders in Case No. U-20649 and Case No. U-20898 are applicable to DTE Electric's proposed customer-requested project offering?

A. It is clear from the Commission's Order in Case No. U-20649 that Michigan EIBC/IEI/AEE's concerns regarding the role of the utility in the behind-the-meter market, the role of utility affiliates, and the competitive procurement process resonated with the Commission.

In this case, I would encourage DTE Electric to similarly limit the customer-requested project offering in the current proceeding to only front-of-the-meter projects. The Company should engage stakeholders through the MI Power Grid process and the "New Technologies and Business Models" workgroup in a discussion of the appropriate scope and role of the utility in behind-the-meter generation.

[22] *Id*., p. 4, footnote 7.

Finally, as discussed below, it is important that the Company more clearly and carefully determine and describe the competitive procurement processes that will be used to provide the resources requested through this offering.

Q. Does the Company propose to use a specific competitive procurement process to develop and build projects for the customer-requested project offering?

A. The Company does not describe the process they plan to use to develop and build projects for the customer-requested project offering. It is not clear if the Company plans to involve third parties or utility affiliates and what procurement process would be utilized.

Q. Do you have any suggestions for this process?

A. Yes. If the Company moves forward with front-of-the-meter projects through the customer-requested project offering, to determine the lowest cost, most reasonable and prudent resources and ownership models, it is best practice to utilize fair, transparent, and inclusive competitive bidding processes. Although I understand that a given customer may want to be involved in the determination of what company would develop and build a project to meet their needs, it is still important that certain best practices are adhered to. There are a number of well-regarded organizations that provide practical explanations of how an effective competitive bidding process should be designed. According to the National Association of Regulatory Utility Commissioners ("NARUC"),[23] the competitive bidding

[23] Tierney, S. F. and Schatzki, T. 2008. "Competitive Procurement of Retail Electricity Supply: Recent Trends in State Policies and Utility Practices," available at http://www.analysisgroup.com/uploadedfiles/content/insights/publishing/competitive_procurement.pdf, last accessed April 28, 2020.

process should be "designed to encourage a competitive response from the market." Public Act 295 of 2008 (MCL 460.1001 Sec.1(2)(c)) similarly establishes the goal of "[encouraging] private investment in renewable energy and energy efficiency."

Q. What specific processes could the Company follow to ensure that any process is fair, transparent, and inclusive?

A. According to NARUC, it is critical that any competitive bidding process be fair and objective.[24] It is important that there is no real or perceived preference given to proposals offered by utilities or utility affiliates. It is also important, even for these customer-requested projects, that the Company solicit bids with an open solicitation to ensure all interested parties are able to participate, thereby decreasing costs for the customer. Finally, it should be made clear to all parties how bids will be evaluated and, specifically, what non-price factors will be considered. For example, if the customer and the Company prefer bids which use Michigan-made materials, that should be made clear to all participants.

<u>Community Solar</u>

Q. What does the Company propose in this filing with respect to community solar?

A. According to Witness Calka,

> DTE Electric is currently in discussions with several large customers interested in partnering with the Company to design and construct location-specific community-solar projects to help them achieve their respective sustainability aspirations.[25]

[24] *Id*.

[25] Calka Direct, p. 23.

Q. What does "community-solar" mean in the context of this proposal?

A. According to Witness Calka in a discovery response to Michigan EIBC/IEI/AEE,

> As described in U-18232 SDE-1.2a Discovery Response, the Company does not have a single definition of community solar; rather community solar is a classification that encompasses multiple different models that typically includes a central solar renewable energy source.[26]

Q. What characteristics do you understand to be important to the definition of community solar?

A. According to business members of Michigan EIBC and AEE, there are several important characteristics of community solar programs. These include the ability for third parties to own the solar system, fair and transparent competition to allow developers to build and operate projects, locally-sited projects, and virtual metering for subscriber bill credits. Michigan EIBC and AEE business members also note that subscribers should be limited to those in a given utility's territory and there should be a limit on the percentage of the facility's capacity that can be subscribed to by any given subscriber. Many Michigan EIBC and AEE business members also support carve outs or incentives to encourage participation in community solar programs from low-and-middle income subscribers. Finally, Michigan EIBC and AEE have consistently supported development of hosting capacity maps for improved distribution system planning and siting of renewable energy projects such as community solar developments.

[26] Exhibit EIB-7, LSS-7.

The Coalition for Community Solar Access similarly lists among its core principles for community solar:[27]

- Allow all customers the opportunity to participate in and directly economically benefit from the construction and operation of new clean energy assets.
- Provide equal access for developers to build and operate community solar projects and interconnect those projects to the serving utility's grid.
- Incorporate a fair bill credit mechanism that provides subscribers with an economic benefit commensurate with the value of the long-term, clean, locally-sited energy produced by community solar projects.

Q. Is there demand for community solar in Michigan?

A. Yes. There is significant demand in Michigan for community solar as evidenced by the number of municipalities, academic institutions, and corporations with carbon reduction and renewable energy goals. According to a study conducted by GTM Research, although Michigan lags currently in the deployment of community solar, with the right policies and programs in place, by 2030 community solar could represent 1.5% to 2.4% of retail electricity sales and serve up to 288,000 subscribers.[28]

Q. Does the customer-requested project offering, as presented by DTE Electric, adhere to the above-described principles for community solar?

[27] Coalition for Community Solar Access. http://www.communitysolaraccess.org/wp-content/uploads/2019/04/2019CommunitySolarPolicyMatrix-2.pdf.

[28] *The Vision for U.S. Community Solar: A Roadmap to 2030*, July 2018, prepared by GRM Research on behalf of Vote Solar. Available https://solstice.us/media_center/vote-solar-community-solar-roadmap-2030/

A. No. It does not appear that the customer-requested project offering meets any of these principles for community solar. In fact, it is unclear to me that the offering proposes a community solar program of any type. For example, in response to a discovery question from Michigan EIBC/IEI/AEE, Witness Calka indicated that "[the] Company does not plan to conduct virtual metering for customers who participate."[29] It is fundamental to any community solar project that subscribers receive a bill credit (via virtual metering) for the electricity produced by their portion of the community solar project.

Q. Is there a way in which the customer-requested project offering could incorporate a community solar offering?

A. Yes, I believe it would be possible to conduct a pilot community solar offering as part of the proposed customer-requested project offering. Although such an offering would not likely incorporate all of the characteristics of community solar described above, it could incorporate some of the characteristics. For example, a municipality could request the construction of a 10 MW solar array within their community. The municipality would sign a contract with DTE Electric to pay for the entire cost of the project, thereby eliminating any perceived risk on the part of the utility related to a lack of future subscribers. DTE Electric, with appropriate input from the municipality, would conduct a fair and transparent competitive procurement process to develop and build the project. The municipality and/or the utility could then recruit subscribers who would be given an electric bill credit for their subscription. Although this arrangement would not meet all of the principles for community solar as outlined above, it would be an initial step toward achieving a more

[29] Exhibit EIB-8, LSS-8.

community-driven approach to community solar that also takes advantage of the competitive market.

Ownership Models

Q. What new resources does the Company predict it will need to fulfill demand for the Voluntary Green Pricing Program?

A. According to the Company's filing in this case,

> The Company proposes to meet its forecasted subscribed MWh through 2025 with a build plan that includes addition of new renewable resources of 420 MW in 2022, 62 MW in 2023, 183 MW in 2024, and 132 MW in 2025. . . . The 420 MW of new renewables will be filled by projects selected from the Company's Fall 2019 Requests for Proposals (RFPs) and includes various ownership structures including power purchase agreement (PPA) and tax-equity financing.[30]

Q. What does the Company propose with respect to PPAs in this case?

A. According to Witness Calka in Direct Testimony,

> The Company requests Commission approval of an FCM structure that would be included with renewable energy PPAs submitted to the MPSC for approval for utilization in the MIGreenPower program. The requested structure would authorize the Company to earn an FCM on a given PPA equal to the sum of the PPA payments in that year multiplied by an incentive factor. The incentive factor would be equal to the Company's authorized permanent after-tax weighted-average cost of capital (WACC) approved by the Commission at the time the contract is approved and would apply for the entire term of the contract.[31]

[30] Application of DTE Electric Company, Case No. U-20713, dated August 31, 2020 ("Application"), PP 12-13; p. 4.

[31] Calka Direct, p. 40.

Q. Do you believe it is appropriate for a utility, in general, to seek a financial compensation mechanism ("FCM") for PPAs?

A. Yes, in general. However, because I am not a finance expert, I do not intend to comment on the specific methodology that DTE Electric proposes to determine the FCM in the current proceeding. Generally, there are strong existing financial incentives for a utility like DTE Electric to build and own all of the facilities from which the utility obtains electricity and a lack of incentives for the utility to contract for electricity using PPAs. This can create a situation where an investor-owned utility is strongly incentivized to avoid projects other than those that they build themselves or purchase from a developer after construction is complete. Section 6t(15) of Public Act 341 of 2016[32] established the ability for the Commission to authorize an FCM for PPAs. It is my understanding that the intent of this legislation was to change the utility's financial incentives and put PPAs on a more equal footing with Company-owned projects.

Although each developer has a different business model, under certain circumstances, a developer may prefer to pursue a deal using a PPA rather than a build-transfer agreement. In this situation, it would be beneficial to the developer if their interests were aligned with, rather than at odds with, the utility conducting the competitive bidding process and contracting for the resources.

[32] MCL 460.6t(15).

Q. What basic principles should apply to any future FCM?

A. It is critical that calculation of any future FCM is transparent and understandable to all potential participants in a given competitive bidding process. Potential bidders should be able to easily calculate exactly what price mark-up to expect for a proposed PPA project in comparison to a build-transfer or Company-owned project. This requires that granular information on the FCM be provided to potential participants.

Q. Please describe the "50/50 split."

A. In Public Act 295 of 2008 (2008 PA 295, MCL 460.1001, *et seq.*), there was a provision commonly referred to as the "50/50 split,"[33] which required utilities to purchase a minimum 50 percent of the renewable energy required to meet the Renewable Portfolio Standard from third-party developers using PPAs. The remaining 50 percent could be met using Company-owned resources. This provision was removed with the passage of Public Act 342 in 2016.

Q. Have there been subsequent decisions related to this "50/50 split" in recent cases before the Commission?

A. Yes. In the Consumers Energy Integrated Resource Plan case (Case No. U-20165), the parties reached a settlement agreement which included, at the request of Michigan EIBC/IEI, a provision requiring that

> … new capacity that the Company intends to procure through the PCA, in each annual solicitation, shall be: (i) acquired through a competitive bidding process; and (ii) 50% will be from PPAs and 50% will be owned by the

[33] *See* Sec. 33(1)(b); MCL 460.1033(1)(b).

> Company, as acquired through a competitive bidding process. The Company, at its sole discretion, may choose to acquire more than 50% of its new capacity from PPAs. The parties further agree that the Company's affiliates will be prohibited from bidding on the portion of the Company's new capacity acquired from PPAs.[34]

Additionally, in the DTE Renewable Energy Plan Case (Case No. U-18232), the Commission noted in their Order on July 18, 2019 that DTE Electric misinterpreted the removal by Public Act 342 of the Public Act 295 provision that no more than 50% of an electric provider's RECs could come from renewable generation owned by the electric provider to mean that "the company has 'unfettered discretion to choose to pursue only company-owned renewable generation.'" (Case No. U-18232, July 18, 2019, Order at 9).

Q. Do you have a proposal regarding use of the FCM to encourage increased use of PPAs by the Company?

A. Yes. As stated, an FCM can ensure that the interests of a third-party developer are aligned with the interests of a utility conducting a competitive bid process and contracting new renewable energy resources. To fulfill demand for the Voluntary Green Pricing Program, DTE Electric predicts it will need nearly 400 MW of additional renewable resources by 2025 beyond the 420 MW it will need in 2022.[35] Given that the Company proposes a mixture of Company-owned and PPA resources using an FCM in the current proceeding, I would suggest that it makes sense moving forward to ensure that both of these types of

[34] Settlement Agreement in Case No. U-20165. Filed March 23, 2019. pp. 8-9.

[35] *In the matter, on the Commission's own motion, regarding the regulatory reviews, revisions, determinations, and/or approvals necessary for DTE Electric Company to fully comply with Public Act 295 of 2008 MPSC Case No: U-20851* ("Case No. U-20851"), p. 3.

resources are considered to ensure the least cost, most prudent resource choices to meet customer demand. This could be done by implementing a "50/50 split" for future resources built to meet demand for the Company's Voluntary Green Pricing Program.

Small-Scale Competitive Procurement

Q. What does the Company propose with respect to smaller renewable energy projects?

A. According to the Direct Testimony of Witness Calka,

> It is the Company's intent to work with the appropriate stakeholders, including the Commission's Staff, to design an appropriate competitive solicitation for small-scale solar or solar plus storage projects (i.e., projects less than 25MW) with CODs in 2022 and 2023, which we anticipate would occur before the end of the year.[36]

Q. Why is the Company proposing to issue a competitive solicitation for small-scale solar or solar plus storage projects?

A. The Direct Testimony of Witness Calka poses the following question: "In its July 9 order in U-18232, the Commission encouraged DTE Electric to consider opportunities for smaller renewable energy projects to participate. Will the Company provide this opportunity?"[37] Based on this question and my conversations with the Company, it is my understanding that the Company plans to issue such a competitive solicitation for small-scale solar or solar plus storage projects to alleviate concerns posed by the Commission in its July 9, 2020 Order in Case No. U-18232.

[36] Calka Direct, p. 34.

[37] *Id.*

Q. Did you provide testimony in Case No. U-18232 on these issues?

A. Yes. In Case No. U-18232, on behalf of the Environmental Law & Policy Center, The Ecology Center, The Solar Energy Industries Association, and Vote Solar, I provided testimony on these issues. This testimony stated, in part, that

> . . . it is important that the RFP be as open as possible to a variety of technologies and all sizes of projects. Rather than pre-determining the outcome, it is important to find the most cost-effective, appropriate, and advantageous solution for a given capacity or resource need. It is not reasonable to assume that a utility, without the benefit of an RFP that is open to all technologies, would have a complete and accurate understanding of the cost-effective options available in the market.[38]

My testimony went on to note, in reference to the fact that the Company's Fall 2019 RFP required solar projects to be at least 25 MW in size,

> Not only do these size restrictions potentially limit a competitive response from the market, but also, the size restrictions eliminate consideration of any PURPA QFs. Given that PURPA QFs could effectively meet the Company's resource needs, it was discriminatory against those projects to categorically exclude them from consideration during the bidding process.[39]

Q. What did the Commission indicate on this issue in its July 9, 2020 Order in Case No. U-18232?

A. In its July 9, 2020 Order in Case No. U-18232, the Commission indicated that

> While the Commission is approving DTE Electric's REP as meeting the requirements of MCL 460.1022, it also acknowledges the validity of a number of the concerns raised by intervenors. Regardless of whether it was

[38] Sherman Direct Testimony, Case No. U-18232, p. 14.

[39] Sherman Direct Testimony, Case No. U-18232, p. 18.

> intentional, the size limitations for both wind and solar projects had the effect of limiting the pool of projects eligible to respond to the RFPs. . . . As DTE Electric considers additional projects to meet other drivers of renewable energy demand – including specifically in its VGP plan filing in August – the Commission strongly encourages the company to find opportunities to allow these projects to be submitted for consideration.[40]

Q. Setting aside the Fall 2019 RFP issued by DTE Electric, what other challenges do small projects face with the interconnection process in DTE Electric's territory?

A. Setting aside issues with the recent RFP and concerns regarding the determination of avoided capacity costs, based on conversations with Michigan EIBC business members, I understand that there are a number of challenges associated with the interconnection process in DTE Electric's territory. As described in an Affidavit from Allen Reese, Director of Development for Pine Gate Renewables, the costs for engineering and distribution studies conducted by the Company are significantly higher than those for Consumers Energy.[41] Specifically, as detailed by Mr. Reese, all 14 projects developed by Pine Gate Renewables that will finish construction in Consumers Energy's service territory by January 2021 underwent "Engineering Reviews and Distribution Studies for $1,200 and $5,000 respectively and have average interconnections facility upgrade costs of $187,000 at an average cost of $0.09/W (AC)."[42] In contrast, Glasgow Solar, LLC, the one similarly-sized project that Pine Gate's predecessor, Cypress Creek Renewables, LLC, submitted for interconnection with DTE Electric, was charged a total of $28,460 for the Engineering

[40] Commission Order, July 9, 2020, U-18232, p. 42.

[41] Exhibit EIB-9, LSS-9.

[42] Exhibit EIB-9, LSS-9.

Review and a total of $77,436.15 for the Distribution Study, which cited "$1,827,801 as Total Construction Cost, a 61% increase over what was shown in the Engineering Review Report and 870% above the average interconnection facilities cost of Pine Gate's 14 Consumers projects."[43]

It is clear from Mr. Reese's Affidavit, as well as from my conversations with other business members of Michigan EIBC, that the Company's interconnection costs are higher than those of Consumers Energy, uncertain and unpredictable, and deter development of renewable energy systems, especially smaller projects. These issues of high, uncertain costs are especially challenging for smaller projects such as those excluded from the Fall 2019 RFP (i.e., <25 MW). This is because these smaller projects cannot take advantage of economies of scale and therefore have more narrow profit margins than larger renewable energy projects.

Q. Why are interconnection studies conducted by DTE Electric more expensive?

A. In conversations with DTE Electric, the Company has indicated to me that their studies are more expensive because the data they provide is of a higher quality and because the Company does not conduct these studies in-house. I am not an interconnection engineer nor a project developer, so I am unable to comment on the relative value of the data gained from a study performed by DTE Electric versus that gained from a study performed by another utility.

[43] *Id*.

Q. Are you aware of any small solar projects that have completed the interconnection study process with another Michigan investor-owned utility and begun operating?

A. Yes. As shown in the Affidavit from Mr. Reese, Pine Gate Renewables has successfully undergone full interconnection study and paid for facilities upgrades for 14 projects totaling 28MW_{AC} in Consumers Energy's territory.[44] These projects will complete construction by the end of January 2021.

In addition, according to Consumers Energy's capacity report filing in Case No. U-20886 from December 1, 2020,[45] Consumers Energy has multiple small (20 MW or smaller) solar projects interconnecting to their distribution system with expected commercial operation dates in 2019 (n = 1), 2020 (n = 16), 2021 (n = 9), 2022 (n = 11) and 2023 (n = 9). Construction has already begun on many of these projects and has been completed for some of them.[46] Some of these projects are presumably those described by Mr. Reese.[47]

Based on Consumers' capacity report filing and the Affidavit provided by Mr. Reese from Pine Gate Renewables, the data provided by the interconnection studies conducted by Consumers Energy does appear to be sufficient to enable projects to move forward successfully to the construction and operation phases.

[44] Exhibit EIB-9, LSS-9.

[45] Exhibit EIB-10, LSS-10.

[46] *Id.*

[47] Exhibit EIB-9, LSS-9.

Q. Are there any other challenges that small projects face with the interconnection process in DTE Electric's territory?

A. Yes. For all developers proposing projects in DTE Electric's territory, it is difficult, if not impossible, to know where a project is in the interconnection queue relative to other projects. This is because the Company provides no public interconnection queue. This is in contrast to Consumers Energy, which maintains a publicly available interconnection queue readily obtained with a simple internet search.[48] In the upcoming year, DTE Electric will likely be required to compile and provide a similar public interconnection queue once the ongoing update to Michigan's Interconnection and Distributed Generation Standards is final.

Q. Do you have any additional suggestions with respect to any future small-scale competitive procurement?

A. Yes. As described above, whatever methodology the Company uses to execute such a small-scale competitive procurement, it should be fair, transparent, and inclusive. In general, this means that all bidders should have access to information about bid evaluations, any required contract terms or standard contract language, and any FCM that will be added to PPA proposals.

In addition, as described above, to ensure an open and inclusive process, the Company should allow both PPA and Company-owned projects with a certain percentage of the total

[48] Consumers Energy. Generator interconnection status report. https://www.consumersenergy.com/-/media/CE/Documents/renewables/generator-interconnection/generator-interconnection-status-report.ashx?la=en&hash=DB1CC52718ADDCBD43ECCE8C6909DE38.

MW (e.g., 50 percent) reserved for PPA projects. If this practice were instituted, it would be reasonable for the Company to request a reasonable FCM for any chosen PPA projects.

Finally, given that small projects have not been able to progress in DTE Electric's territory for quite some time, it would make sense to allow all projects with complete interconnection applications in the interconnection queue by the date of the final order in this case to compete in the small-scale project competitive solicitation. There may be any number of projects which have not yet been placed in the queue because there have not been opportunities to successfully interconnect these projects to the Company's distribution system. The purpose of this offering is not, and should not become, to clear the Company's interconnection queue. That queue clearing process will be undertaken with the first transition batch as soon as the new Interconnection and Distributed Generation Standards are effective. Instead, the purpose of this competitive solicitation should be to construct the best, most prudent projects to serve the needs of customers in the Voluntary Green Pricing Program.

Conclusions and Recommendations

Q. Please summarize your conclusions and recommendations regarding DTE Electric's proposed "customer-requested project offering," renewable energy build, and competitive solicitation for small solar or solar plus storage projects.

A. Based upon my expertise, experience and review of these offerings, I recommend the following:

Customer-Requested Project Offering:

- The Commission should reject the Company's request to offer its proposed customer-requested project offering behind-the-meter.
- The Commission should approve the Company's proposed customer-requested project offering for projects located in front of the meter, but only to the extent that the Company utilizes the best practices for competitive bidding processes as described herein.

Community Solar:

- The Commission should require the Company to conduct a pilot community solar offering as part of the proposed customer-requested project offering. This pilot offering should incorporate at least some of the nationally-recognized characteristics of a community solar program, as described further herein.

Ownership Models:

- The Commission should ensure that any approved FCM for the Company is clear, transparent, and contains granular information so potential bidders can easily calculate the full price of any proposed PPA project in comparison to a build-transfer or Company-owned project.
- The Company should consider agreeing to a 50/50 split between third-party PPAs and Company-owned resources, similar to Consumers Energy's 50/50 split agreement in Case No. U-20165.

Small-Scale Competitive Procurement:

- The Commission should require that the Company reduce its high costs for engineering studies and distribution studies, in order to make those costs more in line with those for other Michigan investor-owned utilities.
- The Commission should require the Company to maintain a public interconnection queue.
- The Company should be required to use nationally-recognized best practices for competitive procurement with respect to any future small-scale renewable energy offerings.
- Given that small projects have not been able to progress in DTE Electric's territory for quite some time, all projects with complete interconnection applications in the interconnection queue by the date of the final order in this case should be allowed to compete in the small-scale project competitive solicitation.

Q. Does this conclude your testimony?

A. Yes.

17344673.3.docx

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

****

In the matter, on the Commission's own motion, regarding the regulatory reviews, revisions, determination and/or approvals necessary for regulated electric providers to comply with Section 61 of 2016 PA 342.	)	Case No. U-20713
In the matter, on the Commission's own motion, regarding the regulatory reviews, revisions, determination and/or approvals necessary to fully comply with Public Act 295 of 2008.	)	Case No. U-20851 Consolidated

EXHIBITS OF
DR. LAURA SHERMAN
ON BEHALF OF
THE MICHIGAN ENERGY INNOVATION BUSINESS COUNCIL,
INSTITUTE FOR ENERGY INNOVATION,
AND
ADVANCED ENERGY ECONOMY

LAURA S. SHERMAN, Ph.D.

cell: 607.592.3026
lsherman@5lakesenergy.com

PROFESSIONAL EXPERIENCE:

Oct. 2017-present **Michigan Energy Innovation Business Council** **VP for Policy Development**

- Develop regulatory and legislative policy positions to support advanced energy businesses
- Engage with the Michigan Public Service Commission and Michigan legislature on behalf of member companies.
- Support policy initiatives focused on wind energy, solar energy, electric vehicles, and corporate purchasing of renewable energy.
- Assist with event planning including for annual conferences, networking events, tours, and legislative networking opportunities.

Feb. 2017-present **5 Lakes Energy**, Lansing, MI **Senior Consultant**

- Research, analysis, communication, and advocacy surrounding complex energy issues.
- Focus areas include renewable energy development, community engagement, stakeholder coordination, and business sustainability.
- Support newsletter, website, and social media communications.

April 2015-Dec. 2016 **U.S. Senate**, Washington, DC **Legislative Assistant/Policy Advisor**

- Policy advisor to Senator Michael Bennet (D-CO) on agriculture, energy, environment, land, and natural resource issues.
- Legislative topics include: farming and ranching, public land conservation and management, water policy, energy development, renewable energy including energy tax incentives and transmission permitting, energy efficiency, endangered species, climate change, sportsmen's issues, environmental pollution and regulations, air quality, and biofuels.
- Drafting legislation; building coalitions; negotiating policy solutions; writing speeches; staffing the Senator at hearings of the Agriculture and Finance Committees.

2014-2015 **U.S. Senate**, Washington, DC **AAAS Congressional Science Fellow**

- Competitively selected AAAS Fellow sponsored by the American Geophysical Union. Served in the Office of Senator Michael Bennet (D-CO).
- Drafting legislation; helping to facilitate political coalitions; meeting with constituents; interacting with federal agencies; delivering policy briefings and recommendations.

2012-2014 **University of Michigan**, Ann Arbor, MI **Postdoctoral Research Fellow**

- Successfully obtained competitive grant funding for novel method to track air pollution from power plants and metal smelters into rainfall across the Great Lakes region.
- In collaboration with epidemiologists, developed and utilized new methods to assess the sources and pathways of human exposure to mercury pollution.
- Published five manuscripts; presented talks and organized scientific sessions at national and international conferences.

2007-2012 **University of Michigan**, Ann Arbor, MI **Graduate Researcher**

- Competed for and received National Defense Science and Engineering Graduate Fellowship and Graham Environmental Sustainability Institute Doctoral Fellowship.
- Developed groundbreaking methods to "fingerprint" mercury pollution from coal-fired power plants and trace it into rainfall, lake sediments, and fish.
- Published eight manuscripts, was interviewed for "The Environment Report" on NPR and general-circulation science magazines, presented research at national and international conferences.
- Ph.D. dissertation received university-wide ProQuest Distinguished Dissertation Award and departmental John Dorr Graduate Academic Achievement Award.

2005-2007 **Massachusetts Institute of Technology**, Boston, MA **Research Scientist**

- Found evidence for early lift on Earth in ancient rocks. Published two manuscripts.

SERVICE & LEADERSHIP:

2017-present	**Communications Chair** for Advancing Women in Energy
2013-2104	**Supported** the Ann Arbor Energy Commission in developing and researching options for community solar projects
2009-2014	**Peer reviewer** of more than 20 scientific manuscripts
2009	**Initiator and organizer** of new departmental seminar series, University of Michigan
2008-2010	**President** of department student organization (GeoClub), University of Michigan
2008	**Lead organizer** of Michigan Geophysical Union Poster Conference
2007-2008	**Department Steward** to Graduate Employees Union, University of Michigan

EDUCATION:

Ph.D. 2012 Earth and Environmental Sciences, **University of Michigan** (GPA: 8.837 out of 9.0)
B.S. 2005 Geological and Environmental Science, **Stanford University** (GPA: 4.007 out of 4.33)

MPSC Case No.: U-20713
Requestor: EIBCIEIAEE
Question No.: EIBCIEIAEEDE-1.2a]
Respondent: B. T. Calka
Page: 1 of 1

Question: On page 12 of Witness Calka's testimony, he states that "The Company is working with certain large customers and exploring the feasibility of on-site renewable energy projects that would be fully subscribed by the customer hosting the infrastructure."

a. Please define "on-site" in the context of this proposal.

Answer: With respect to customer-requested projects, "on-site" refers to a location on land that is contiguous with the customer's premise and that features a DTE Electric meter, or another location on property owned by or leased on behalf of the customer or DTE.

Attachments: None.

MPSC Case No.: U-20713
Requestor: EIBCIEIAEE
Question No.: EIBCIEIAEEDE-1.7a]
Respondent: B. T. Calka
Page: 1 of 1

Question: On page 23 of Witness Calka's testimony, he indicates that "as an initial matter, any commercial or industrial customer is eligible, in that no customers are prohibited from proposing a locally-sited project." However, on page 34 of his testimony, Witness Calka indicates that the Company is anticipating "executing customer-requested project contracts with municipalities, higher education institutions, and other public-sector entities."

a. Does the Company anticipate that the customer-requested project offering will be limited to "municipalities, higher education institutions and other public-sector entities"?

Answer: The Company has not made the determination to limit participation to municipalities, higher education institutions, and other public-sector entities.

Attachments: None.

MPSC Case No.: U-20713
Requestor: EIBCIEIAEE
Question No.: EIBCIEIAEEDE-1.3a]
Respondent: B. T. Calka/Legal
Page: 1 of 1

Question: Does the Company propose that the customer-requested project offering would be limited to front-of-the-meter projects?

a. If not, under what specific legislative or regulatory authority does the Company propose to offer behind-the-meter projects?

Answer: DTE Electric objects to the interrogatory because it seeks a legal conclusion. In further answer and without waiving the objection, the Company is not proposing, in this case, a particular program. Rather the Company is exploring ways to satisfy requests that its customers are making of it, and some of those requests have included behind-the-meter projects as well as in-front-of-the-meter projects. DTE Electric is not aware of any legislation that prohibits DTE Electric from building, owning and operating a generating unit whether it be behind-the-meter or in-front-of-the-meter, and in fact the Company has previously received Commission approval for behind-the-meter projects it has constructed for its customers, albeit outside the VGP space.

Attachments: None.

MPSC Case No.: U-20713
Requestor: EIBCIEIAEE
Question No.: EIBCIEIAEEDE-1.6b]
Respondent: B. T. Calka
Page: 1 of 1

Question: On page 23 of Witness Calka's testimony, he indicates that a customer participating in this offering would be "required to subscribe to the output of the project for the life of the asset."

b. Does the Company propose to develop standard term lengths for these customer- requested projects?

Answer: Yes, the Company will look to develop standard term lengths for these projects. The Company has not set the standard term lengths at this time, but believes the term lengths will be between 20-35 years.

Attachments: None.

MPSC Case No.: U-20713
Requestor: EIBCIEIAEE
Question No.: EIBCIEIAEEDE-1.4ai]
Respondent: B. T. Calka
Page: 1 of 1

Question: On page 35 of Witness Calka's testimony, he states that "Executed customer-requested contracts will be presented to the Commission for approval and filed ex-parte in a future regulatory filing in the same docket as the August 2020 Amended REP."

a. Does the Company propose to engage stakeholders prior to presenting these contracts to the Commission for ex-parte approval?

i. If so, how specifically would the Company engage stakeholders prior to presenting these contracts to the Commission for approval?

Answer: No, the Company does not propose to engage stakeholders prior to presenting any customer-requested contracts to the Commission for approval.

Attachments: None.

MPSC Case No.: U-20713
Requestor: EIBCIEIAEE
Question No.: EIBCIEIAEEDE-1.1a]
Respondent: B. T. Calka
Page: 1 of 1

Question: According to the Company's filing, "the Company will also offer a customer-requested offering to design and construct location-specific community-solar projects to help large customers achieve their respective sustainability aspirations."

a. How, specifically does the Company define "community-solar" in reference to this proposed customer-requested offering?

Answer: As described in U-18232 SDE-1.2a Discovery Response, the Company does not have a single definition of community solar; rather community solar is a classification that encompasses multiple different models that typically includes a central solar renewable energy source.

Attachments: None.

MPSC Case No.: U-20713
Requestor: EIBCIEIAEE
Question No.: EIBCIEIAEEDE-1.1c]
Respondent: B. T. Calka
Page: 1 of 1

Question: According to the Company's filing, "the Company will also offer a customer-requested offering to design and construct location-specific community-solar projects to help large customers achieve their respective sustainability aspirations."

c. Does the Company plan to conduct virtual metering for customers who participate in such a "community-solar" project?

Answer: The Company does not plan to conduct virtual metering for customers who participate.

Attachments: None.

A STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

*****

In the matter, on the Commission's own motion, regarding the regulatory reviews, revisions, determination and/or approvals necessary for regulated electric providers to comply with Section 61 of 2016 PA 342.	)	Case No. U-20713

AFFIDAVIT OF ALLEN REESE

I, Allen Reese, first being duly sworn, do hereby depose and state that if called as a witness to testify, I have personal knowledge of and am able to testify to the following:

1. I am the Director of Development for Pine Gate Renewables.
2. In this role, I am charged with the development of Pine Gate Renewables development activities in Michigan, including over 40 contracted utility scale solar farms sized between 2 MW – 20 MW_{AC}. These project span four utility service territories and contain projects with active interconnections with both Consumers Energy and DTE.
3. Pine Gate Renewables is a solar energy company with experience developing and building utility-scale solar facilities throughout the United States. Pine Gate is committed to growing Michigan's energy infrastructure and solar workforce through a planned investment in the state of low-cost, solar energy. Pine Gate is completing construction on fourteen (14) solar energy facilities in Consumers Energy service territory totaling 28MW_{AC}, and developing an additional twenty-five (25) projects, totaling roughly 308 MW_{AC}, slated to be constructed through 2023.

4. Pine Gate Renewables has successfully submitted, undergone full interconnection study, executed interconnection agreements, and paid for facilities upgrades on the 14 projects mentioned above that are finishing construction by the end of January 2021. In addition to 336 MW Pine Gate is actively developing with Consumers Energy, Pine Gate is also managing and hopes to develop and construct over 60 projects with DTE totaling 416 MW_{AC}. Uncertain and unpredictable interconnection study costs are a major barrier to development of Pine Gate's projects in DTE territory.
5. Of the 14 projects submitted to Consumers Energy and under construction, all have undergone Engineering Reviews and Distribution Studies for $1,200 and $5,000 respectively and have an average interconnections facility upgrade costs of $187,000 at an average cost of $0.09/W (AC). All projects are undergoing final construction and testing and will be operating in parallel with the grid by the end of January 2021.
6. Of the projects now managed by Pine Gate whose interconnection requests were originally submitted to DTE by Cypress Creek Renewables, LLC (Cypress Creek), one project, Glasgow Solar, LLC (Glasgow), underwent a full interconnection review and is an equivalent size to the 14 projects referenced above. Glasgow was the only project to complete both its Engineering Review and Distribution Study, due in large part to the shifting and and exorbitant study and facility upgrade costs required by DTE. Glasgow submitted its interconnection request on August 25, 2017. Following execution of Glasgow's Engineering Review Agreement on September 28, 2017, and payment of an initial $2,500 fee on September 29, 2017 DTE informed Cypress Creek it must submit an additional $25,960 deposit for an Engineering Review report, totaling $28,460 in total

Engineering Review study costs, or 2371% of the cost of an equivalent study with Consumers.

7. On February 27th, 2018 DTE released its final Glasgow Engineering Review Report, but required a true-up of the $25,960 before advancing interconnection. That payment was made on March 27, 2018. DTE's Engineering Review Report claimed the "ball park estimate" for facility upgrades would range between $807,000 and $1,130,000, or between 430% and 600% of the average cost ($187,000) for similar upgrades on the Consumers system, as outlined above.
8. Following the Engineering Review Report, DTE required an additional $20,000 deposit for a Distribution Study, which was paid on March 27, 2018. After the Distribution Study was completed on October 15, 2018, DTE required an additional payment of $55,436.15, bringing the total Distribution Study costs to $77,436.15, or 1548% of the cost of an equivalent Distribution study with Consumers.
9. The Distribution Study cited $1,827,801 as Total Construction Cost, a 61% increase over what was shown in the Engineering Review Report and 870% above the average interconnection facilities cost of Pine Gate's 14 Consumers projects. In total, Pine Gate's predecessor Cypress Creek was charged $105,896.15 to study Glasgow's ability to interconnect to DTE's grid –$99,696.15 more than the cost of equivalent studies in Consumers service territory.
10. Compared to Pine Gate's experience with Consumers Energy, DTE's process for calculating interconnection study costs is uncertain and acts as a deterrent to development of projects that could bring affordable clean energy to DTE's customers.

Further Affiant sayeth not.

Allen Reese
Director of Development
Pine Gate Renewables

WITNESSETH: Tasha N. Glenn

Notary public Buncombe County
Tasha N. Glenn

TASHA N GLENN
Notary Public, North Carolina
Buncombe County
My Commission Expires
03/04/2024

Case No.: U-20886
Utility: Consumers Energy Company
Date: December 1, 2020
Exhibit No.: 7 of 11

Exhibit 7—New or Upgraded Purchased Power

Line	(a) Electric Generator Name	(b) Fuel or Renewable Type	(c) Added Unit Nameplate MWs	(d) Class Average / MISO Capacity Credit	(e) Added ZRCs	(f) Expected COD	(g) Planned MPSC Regulatory Approval Date	(h) Planned MISO Interconnection Queue Date	(i) Planned MISO Interconnection Agreement Approval	(j) Construction Start Date	(k) Construction End Date
1	13 Mile Solar, LLC	Solar	2	50.00%	1	December 2020	Complete	n/a	n/a	June 2020	December 2020
2	Allegheny Solar	Solar	11	50.00%	5	October 2021	Complete	n/a	n/a	January 2021	October 2021
3	Angola Solar, LLC	Solar	2	50.00%	1	December 2020	Complete	n/a	n/a	June 2020	December 2020
4	Aurthur Solar Farm, LLC	Solar	2	50.00%	1	October 2021	Complete	n/a	n/a	January 2021	October 2021
5	Bingham Solar, LLC	Solar	20	50.00%	10	November 2020	Complete	n/a	n/a	May 2020	November 2020
6	Blue Elk Solar I	Solar	20	50.00%	10	May 2023	Complete	n/a	n/a	November 2021	May 2023
7	Blue Elk Solar III	Solar	20	50.00%	10	May 2023	Complete	n/a	n/a	November 2021	May 2023
8	Blue Elk Solar IV	Solar	20	50.00%	10	May 2023	Complete	n/a	n/a	November 2021	May 2023
9	Blue Elk Solar VII	Solar	12	50.00%	6	May 2023	Complete	n/a	n/a	November 2021	May 2023
10	Bullhead Solar, LLC	Solar	2	50.00%	1	December 2020	Complete	n/a	n/a	June 2020	December 2020
11	Burns Park Solar	Solar	10	50.00%	5	July 2023	Complete	n/a	n/a	January 2021	July 2023
12	Byrne Solar	Solar	5	50.00%	3	October 2021	Complete	n/a	n/a	January 2021	October 2021
13	Captain Solar, LLC	Solar	2	50.00%	1	December 2020	Complete	n/a	n/a	June 2020	December 2020
14	Cement City	Solar	20	50.00%	10	July 2023	Complete	n/a	n/a	January 2021	July 2023
15	Coldwater Solar, LLC	Solar	2	50.00%	1.0	December 2020	Complete	n/a	n/a	June 2020	December 2020
16	Geddes 1 Solar, LLC	Solar	2	50.00%	1	December 2020	Complete	n/a	n/a	June 2020	December 2020
17	Geddes 2 Solar, LLC	Solar	2	50.00%	1	December 2020	Complete	n/a	n/a	June 2020	December 2020
18	Golden Solar Farm, LLC	Solar	2	50.00%	1	October 2021	Complete	n/a	n/a	January 2021	October 2021
19	Good Fruit Storage LLC	Solar	0.2	50.00%	0.1	September 2019	Complete	n/a	n/a	March 2019	September 2019
20	Greenstone Solar, LLC	Solar	20	50.00%	10	May 2023	Complete	n/a	n/a	November 2021	May 2023
21	Hazel Solar, LLC	Solar	2	50.00%	1	December 2020	Complete	n/a	n/a	June 2020	December 2020
22	Hendershot Solar, LLC	Solar	2	50.00%	1	December 2020	Complete	n/a	n/a	June 2020	December 2020
23	Interchange Solar, LLC	Solar	2	50.00%	1	December 2020	Complete	n/a	n/a	June 2020	December 2020
24	Jack Francis Solar, LLC	Solar	2	50.00%	1	December 2020	Complete	n/a	n/a	June 2020	December 2020
25	Johnsfield Solar	Solar	10	50.00%	5	July 2022	Complete	n/a	n/a	January 2021	July 2022
26	Lake City Solar	Solar	2	50.00%	1	October 2021	Complete	n/a	n/a	January 2021	October 2021
27	Letts Creek	Solar	15	50.00%	8	July 2022	Complete	n/a	n/a	January 2021	July 2022
28	Lightfoot Solar	Solar	10	50.00%	5	October 2021	Complete	n/a	n/a	January 2021	October 2021
29	Lyons Road Solar	Solar	20	50.00%	10	July 2022	Complete	n/a	n/a	January 2021	July 2022
30	Macbeth Solar	Solar	20	50.00%	10	July 2022	Complete	n/a	n/a	January 2021	July 2022
31	May Shannon Solar, LLC	Solar	2	50.00%	1	December 2020	Complete	n/a	n/a	June 2020	December 2020
32	Midcontinent Solar, LLC	Solar	20	50.00%	10	May 2023	Complete	n/a	n/a	November 2021	May 2023
33	Morey Solar	Solar	2	50.00%	1	October 2021	Complete	n/a	n/a	January 2021	October 2021
34	NextSun Energy LLC	Solar	2	50.00%	1	September 2022	Complete	n/a	n/a	December 2021	September 2022
35	Pullman	Solar	20	50.00%	10	July 2022	Complete	n/a	n/a	January 2021	July 2022
36	Robert Swift Solar Farm, LLC	Solar	2	50.00%	1	October 2021	Complete	n/a	n/a	January 2021	October 2021
37	Rosco Solar	Solar	10	50.00%	5	July 2023	Complete	n/a	n/a	January 2021	June 2023
38	Shipsterns Solar	Solar	20	50.00%	10	July 2022	Complete	n/a	n/a	January 2021	July 2022
39	Stoneheart Solar, LLC	Solar	2	50.00%	1	December 2020	Complete	n/a	n/a	June 2020	December 2020
40	Surbrook Solar	Solar	10	50.00%	5	October 2021	Complete	n/a	n/a	January 2021	October 2021
41	TART Solar, LLC	Solar	8	50.00%	4	July 2022	Complete	n/a	n/a	January 2021	July 2022
42	Temperance Solar, LLC	Solar	20	50.00%	10	November 2020	Complete	n/a	n/a	May 2020	November 2020
43	Topanga Solar	Solar	20	50.00%	10	July 2022	Complete	n/a	n/a	January 2021	July 2022
44	Wilford Solar	Solar	20	50.00%	10	July 2022	Complete	n/a	n/a	January 2021	July 2022
45	Woodley Solar	Solar	1	50.00%	0	July 2022	Complete	n/a	n/a	January 2021	July 2022
46	Workman Solar	Solar	2	50.00%	1	December 2020	Complete	n/a	n/a	June 2020	December 2020
47	150 MW 2022 Solar PPA	Solar	150	50.00%	75	May 2022	July 2020	July 2020	January 2021	March 2021	March 2022
48	150 MW 2023 Solar PPA	Solar	150	50.00%	75	May 2023	July 2021	July 2021	January 2022	March 2022	March 2023
49	250 MW 2024 Solar PPA	Solar	250	50.00%	125	May 2024	July 2022	July 2022	January 2023	March 2023	March 2024

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

****

In the matter, on the Commission's own motion, regarding the regulatory reviews, revisions, determination and/or approvals necessary for regulated electric providers to comply with Section 61 of 2016 PA 342.	)	Case No. U-20713
In the matter, on the Commission's own motion, regarding the regulatory reviews, revisions, determination and/or approvals necessary to fully comply with Public Act 295 of 2008.	)	Case No. U-20851 Consolidated

DIRECT TESTIMONY OF
CAITLIN MARQUIS
ON BEHALF OF
THE MICHIGAN ENERGY INNOVATION BUSINESS COUNCIL,
INSTITUTE FOR ENERGY INNOVATION,
AND
ADVANCED ENERGY ECONOMY

Q. State your name, business name and address.

A. My name is Caitlin Marquis and I am Director at Advanced Energy Economy ("AEE"), located at 1010 Vermont Ave. NW, Suite 1050, Washington, D.C. 20005.

Q. On whose behalf are you appearing in this case?

A. I am appearing on behalf of Michigan Energy Innovation Business Council ("Michigan EIBC"), Institute for Energy Innovation ("IEI"), and AEE, collectively referred to as "Michigan EIBC/IEI/AEE."

Q. Please summarize your education and professional backgrounds.

A. I have worked for AEE for six years. I facilitate AEE's "Advanced Energy Buyers Group," a business-led coalition of large energy users who have come together to engage on energy policy issues that will help them achieve their ambitious clean energy targets. In this capacity, I have worked extensively with both corporate purchasers and renewable energy developers on the topic of renewable energy procurement solutions. Prior to my employment with AEE, I worked at Altenex LLC (now part of Edison Energy), an energy management network that assists leading companies with their renewable energy procurement decisions. I hold a B.A. from Harvard University and a Master of Science in Environmental Change and Management from the University of Oxford.

Q. Have you testified as an expert witness in prior proceedings?

A. Yes, I have testified before the State Corporation Commission in Virginia in Case No. PUR-2017-00060 and Case No. PUR-2019-00094, and before the Michigan Public Service

Commission ("MPSC" or the "Commission") in Case No. U-18351, Case No. U-18352, and Case No. U-20649.

Q. Are you sponsoring any exhibits?

A. Yes, I am sponsoring the following exhibits:

1. Exhibit EIB-11 (CM-1): Résumé of Caitlin Marquis.
2. Exhibit EIB-12 (CM-2): DTE Proposed Standard Contract Rider No. 19 MIGreenPower – Large Customer Voluntary Green Pricing Program, Exhibit of DTE Witness Brian T. Calka, Case No. U-20713, August 31, 2020.
3. Exhibit EIB-13 (CM-3): Discovery response to Michigan EIBC, IEI and AEE, EIBCIEIAEEDE-2.2.

Q. What is the purpose of your Direct Testimony?

A. The purpose of my Direct Testimony is to evaluate and provide recommendations regarding DTE Electric Company's ("DTE," "DTE Electric," or the "Company") updated Rider 19.

Q. **How is your testimony organized?**

A. My testimony is organized as follows:

I. Demand for Utility Renewable Energy Programs Across the Country.

II. Evaluation of the Revised Rider 19 Program.

i. Support for Revisions Made to Rider 19.

ii. Areas for Further Improvement.

III. Recommendations and Conclusion.

Demand for Utility Renewable Energy Programs Across the Country

Q. Rider 19 is intended for large commercial and industrial customers. Are these customers interested in renewable energy?

A. Yes. Demand for renewable energy among large customers—like those eligible to enroll in Rider 19—has been strong and growing over the past several years. Since 2016, large customers have signed nearly 25 GW of renewable energy contracts, with a record of more than 9 GW in 2019 alone; as of October 2020, nearly 5 GW of renewable energy contracts have been signed by large commercial and industrial customers.[1]

Q. Do these renewable energy purchases rely on utility involvement?

A. Most do not. The vast majority of renewable energy power purchase agreements ("PPAs") occur through direct bilateral contracting between large customers and renewable energy developers, often via financial swaps available in organized wholesale markets. According to Bloomberg New Energy Finance, such transactions accounted for 80% of renewable energy deals signed in the U.S. in 2019.[2]

[1] https://rebuyers.org/deal-tracker/

[2] Bloomberg New Energy Finance, "Corporate Clean Energy Buying Leapt 44% in 2019, Sets New Record" (Jan. 28, 2020), https://about.bnef.com/blog/corporate-clean-energy-buying-leapt-44-in-2019-sets-new-record/.

Q. If most purchases occur without utilities, are utility programs needed?

A. Yes, utility programs like the DTE's Rider 19 have an important role to play in enabling companies to meet their renewable energy targets, particularly in vertically integrated markets. Driven by a range of motivations—including the need to reduce financial risk and the desire to maximize local environmental and economic benefits—many companies are specifically seeking local renewable energy projects that are directly tied to their electricity consumption through their utility bill. For customers of vertically integrated utilities, participation in a utility program is generally the *only* option for a customer to pursue renewable energy at levels above and beyond default service—making it even more important that utility programs are actually suited to customers' needs and preferences.

Q. How are other utilities across the country responding to this demand?

A. Utilities are stepping up to develop renewable energy offerings that will allow large commercial and industrial ("C&I") customers to meet their renewable energy targets. Since the first such utility renewable energy programs were introduced in 2013, utilities have introduced more than 36 renewable energy programs pending or available across 19 states. To date, roughly 3.7 GW of C&I renewable energy procurement has relied on these utility "green tariffs."[3]

Q. Are these programs all the same or similar?

A. Successful programs follow a shared set of best practices, but vary in design according to customer needs and local circumstances. Based on our direct experience and that of our

[3] https://rebuyers.org/wp-content/uploads/2020/08/REBA_Utility_Green_Tariff_Update_July_2020.pdf.

members in working with utilities across the country, AEE has developed a set of best practices for utility renewable energy programs:

- Program pricing that reflects actual market pricing and program costs;
- Competitive project solicitation to ensure lowest-cost, best-fit resources to meet customer needs;
- Development of new renewable energy, beyond business-as-usual;
- Allowing a range of customers to participate;
- Providing flexible or varied offerings to meet the needs of a range of different customers; and
- No adverse impact on non-participating customers.[4]

These principles and the experience behind them guide my assessment of the needed revisions to Rider 19.

Q. What is the benefit to states and utilities of meeting corporate renewable energy demand by developing workable utility offerings?

A. States that allow opportunities for corporate renewable energy procurement are able to meet the needs of businesses—helping to attract and retain growing companies—while also making faster progress toward a decarbonized grid at no cost to other ratepayers. Strong corporate renewable energy procurement activity also accelerates the growth of an in-state renewable energy industry, bringing jobs, tax revenue, and experience with renewable energy deployment and integration that will benefit all ratepayers and the state

[4] AEE Institute, *Essential Elements of Next-Generation Renewable Energy Tariffs* (2017), available at https://info.aee.net/making-corporate-renewable-energy-purchasing-work-for-all-utility-customers.

overall. Unlocking new opportunities for corporate procurement is therefore consistent with Governor Whitmer's comprehensive plan to protect Michiganders' public health and the environment and help develop new clean energy jobs by putting Michigan on a path towards becoming fully carbon-neutral by 2050,[5]

Evaluation of the Revised Rider 19 Program

Q. What is your overall evaluation of Rider 19?

A. Overall, I find Rider 19 to be a reasonable utility renewable energy offering for large customers. The program relies on a fair and cost-based design, charging customers according to the levelized cost of energy ("LCOE") of renewable resources serving Rider 19, and crediting them according to the energy and capacity value those resources deliver to the grid. Rider 19 has clearly already met the needs of some large Michigan customers, and DTE's proposal to expand the program and to transition Rider 19 from a pilot to a permanent offering will allow additional customers to participate.

Q. Does Rider 19 fall short of meeting customers' needs and preferences in any ways?

A. One key challenge for prospective Rider 19 customers is committing to a long-term program that carries a net premium. A cost premium is a barrier to participation for many customers, and the increasing cost-competitiveness of wind and solar energy makes net premium programs especially difficult for customers to accept. If new resources added to

[5] *MI Healthy Climate Plan*, Executive Directive 2020-10 and Executive Order 2020-182, September 23, 2020. https://www.michigan.gov/whitmer/0,9309,7-387-90499_90640-540289--,00.html

the program are procured competitively and at a fair price, the program premium should decline with technology costs, enabling more customers to participate.

Q. What changes to Rider 19 is DTE seeking in this filing?

A. Based on my understanding of DTE's filing, the Company is proposing six key changes to Rider 19. Specifically, DTE proposes to:

1. Add a "Flexible Pre-Payment Option";[6]
2. Add a 15-year term option (in addition to the previously offered terms of five, 10, and 20 years);[7]
3. Transition the program from a pilot to a permanent program;[8]
4. Add new resources to accommodate forecasted demand growth;[9]
5. Switch to a "net premium" assessment rather than using the levelized cost of new energy ("LCOE") "as the evaluation basis for cost-averaging new renewable energy projects into the program";[10] and
6. Explicitly define the early termination fees.[11]

[6] Direct Testimony of Brian T. Calka, Case No. U-20713, dated August 31, 2020 ("B.T. Calka Testimony") at 12.

[7] DTE Proposed Standard Contract Rider No. 19 MIGreenPower – Large Customer Voluntary Green Pricing Program, Exhibit of DTE Witness Brian T. Calka, Case No. U-20713, August 31, 2020 ("Rider No. 19") (Section C, Term and Form of Agreement).

[8] B.T. Calka Testimony at 10.

[9] B.T. Calka Testimony at 28-34.

[10] B.T. Calka Testimony at 12.

[11] Rider No. 19 (Section D, Early Termination of Agreement).

Q. Do you support these proposed revisions to the Rider 19?

A. I support most of the proposed revisions to Rider 19 and encourage caution with respect to some of the other proposed revisions. In particular, I encourage continued focus on competitive procurement allowing for full and fair participation by third-party developers as DTE adds new resources to meet customer demand under Rider 19 and all the Voluntary Green Pricing ("VGP") programs, urge the Commission to scrutinize the proposed "net premium" evaluation approach, and recommend a minor clarification with respect to the early termination fee. In addition to the proposed revisions, I also suggest adding another pricing option to allow participating customers to better manage their costs and risk.

<u>i. Support for Revisions Made to Rider 19</u>

Q. Which of the proposed revisions to Rider 19 do you support without reservation?

A. I fully support the following proposed revisions to Rider 19:

1. Addition of a pre-payment option;
2. Addition of a 15-year term option (in addition to the previously offered terms of five, 10, and 20 years); and
3. Transitioning the program from a pilot to a permanent program.

Q. Please explain why you view these changes as improvements to Rider 19.

A. The three changes listed above add optionality and certainty for participating and potential customers. First, the pre-payment option offers customers additional flexibility, without impacting the program in any way or harming those customers that do not wish to enroll in the pre-payment option. DTE Witness Calka states that this option was specifically

requested by customers who have "expressed a need for the flexible pre-payment option in response to unique budgetary limitations, which may otherwise prohibit them from participating in the MIGreenPower program."[12] Because the pre-payment option would remove a barrier to participation without impacting the overall program or other customers, it is an improvement to the program and should be accepted. Second, the addition of a 15-year term option gives customers more options to subscribe to the program without eliminating any of the term lengths available today (five, 10, and 20 years).[13] In particular, I note that many PPAs signed by large companies are in the 10-15 year range, so the addition of a 15-year term aligns with the procurement practices and strategies that many companies have developed. Finally, making Rider 19 a permanent program will offer interested customers additional assurances that the program will continue to be available. This is particularly relevant to companies considering expanding or locating in Michigan, as these prospective customers may not be seeking to start participating in the program until farther into the future. Importantly, making Rider 19 a permanent program does not mean that DTE and the Commission cannot continue to work on changes and improvements to the program.

ii. Areas for Further Improvement

Q. Please list the remaining areas for improvement.

A. As I noted above, the primary drawback of the Rider 19 program is the cost premium faced by participating customers. The most impactful and important step to ensure the success of

[12] B.T. Calka Testimony at 22.

[13] Rider No. 19 (Section C, Term and Form of Agreement).

the Rider 19 program is to improve the cost-competitiveness of the renewable resources serving Rider 19 customers. While I strongly support DTE's request to add additional resources to meet growing demand under Rider 19, I recommend that the Company take steps to ensure that new resources added are cost-competitive and best suited to meet customer needs. This can best be accomplished by adopting the competitive procurement best practices discussed in EIBC/IEI/AEE witness Dr. Laura Sherman's Direct Testimony in this proceeding.[14] Second, I raise some concerns with the Company's proposal to switch to a net premium approach to evaluate new projects to be cost-averaged into the program, which I believe deserves additional explanation and scrutiny. Third, I recommend a minor revision with respect to the redline tariff changes that seek to clarify the early termination fee. Finally, I recommend adding additional pricing options to meet the needs of a broader range of potential customers.

Q. Do you support DTE's proposal to add new resources to meet demand under Rider 19?

A. Yes, I agree with DTE's request to add new resources to meet demand for Rider 19. The program has proven popular to date, and DTE has conducted detailed analysis of additional customer interest in the program.[15] To avoid lags in availability, which can frustrate customers' ability to meet their ambitious clean energy targets in a timely manner and

[14] Direct Testimony of Dr. Laura Sherman, Case No. U-20713; U-20851, dated December 23, 2020, pp. 19-20 ("Sherman Direct").

[15] B.T. Calka Testimony at 27-30.

therefore diminish interest in the program, it is important to begin the process of identifying new resources well in advance of the need for such resources.

Q. How do you suggest that DTE ensure the cost-competitiveness of the renewable resources serving Rider 19 customers?

A. To ensure the cost-competitiveness of the mix of resources serving Rider 19 subscribers, I recommend relying on a robust and open competitive procurement process allowing for full and fair participation by third-party developers. Such a process will ensure that the selected resources are the best available to meet customer needs on the basis of price and performance.

Q. What recommendations do you have to ensure that new resources added to the Rider 19 program are competitively priced?

A. As noted previously, I support the recommendations put forward in the direct testimony of Dr. Laura Sherman in this case. In particular, Dr. Sherman highlights the importance of enabling third-party PPA resources to compete equally with Company-owned resources to meet customer demand under all the VGP programs, which include Rider 19. Dr. Sherman highlights the "50/50 split" between PPAs and company ownership as one potential solution to ensure that at least some of the resources added to the VGP programs are competitively sourced.[16]

[16] Sherman Direct, pp. 26-28.

Q. You mentioned that you have potential concerns regarding the Company's proposal to switch to a net premium as the evaluation basis for cost-averaging new projects into the program. Please explain DTE's proposal.

A. DTE has provided very little information about this aspect of its filing, but as I understand it, the Company plans to use a five-year forecast of net premium (LCOE minus the expected energy and capacity credits) as a primary criterion for selecting projects to be added to Rider 19. After selecting new projects, the Company plans to compare the forecasted net premium of the new resources to that of the existing Rider 19 resources. If new projects have a lower forecasted net premium than existing projects, they would be cost-averaged into the program and existing subscribers would have their subscription charge and renewable energy credits adjusted accordingly (based on the LCOE and the actual monthly renewable energy credits of the new projects, respectively). If the new projects have a higher forecasted net premium than existing projects, existing customers would continue to be served by existing resources and new customers would subscribe to the new higher-net premium resources. It is my understanding that DTE's "forecasted net premium" would be used for evaluation purposes and would not appear anywhere on the customers' bill; customer bills would reflect the *actual net* premium, or the difference between the subscription charge (based on LCOE only) and the energy and capacity credits (based on actual resource performance and market prices, which will vary monthly).

Q. What are your concerns with this approach, as you understand it?

A. I am concerned that DTE has not fully explained how it would forecast the five-year net premium, nor is it clear that existing or prospective customers would be given insight into

the process or results of this evaluation. Although the Company has attempted to explain the manner in which it proposes to cost-average new projects into the subscription charge, many questions on this new forecasting methodology still remain.[17] The accuracy of the five-year net premium forecast and its applicability over the life of the project is critical to ensure that new customers do not end up paying more relative to the current program. Specifically, the net premium approach means that customers may end up paying (via the subscription charge) for a renewable energy project with a higher LCOE, on the basis of higher expected energy and capacity credits. If these higher credits do not materialize, customers would end up with a higher net premium compared to the current approach. Particularly for existing customers, who signed up with the understanding that their subscription charge could decrease but would not increase, this change may cause concerns, because it could result in a higher subscription charge on the basis of an expected but uncertain increase in Renewable Energy Resource Credits.

If DTE intends to incorporate the forecasted net premium into customers' bills in any way, rather than simply using this forecast to evaluate new projects and determine whether new projects would be blended into the resource mix serving existing customers, this would raise additional concerns. Specifically, incorporating the forecasted net premium into customers' bills would expose customers to both the forecasted *and* actual energy and capacity credits.

[17] *See* Exhibit EIB-13 (CM-3), EIBCIEIAEEDE 2.2.

Q. Do you recommend returning to the current LCOE approach?

A. Not necessarily. The net premium approach could result in selection of projects that will deliver greater overall value to customers. However, I strongly urge the Commission to scrutinize DTE's criteria for evaluating the five-year net premium of renewable energy projects and assess whether a five-year net premium forecast is appropriate under a program that allows customers to sign up for as long as 20 years. If the Commission finds any cause for concern, it should reject the net premium approach.

Q. Do you have any other recommendations with respect to the net premium evaluation?

A. Yes. I also recommend that the Commission require DTE to provide prospective customers with information about the net premium evaluation process so they enter the program with a full understanding of how additional resources could impact their subscription charge and monthly bill credits moving forward. Likewise, I recommend that the Commission require DTE to provide existing customers with information about the process and outcome of the net evaluation process as new projects are brought into the program and either cost-averaged in or not cost-averaged in.

Q. What minor revision do you recommend with respect to the early termination fee?

A. While I support DTE's proposal to increase transparency with respect to termination fees customers would face if they were to exit the Rider 19 program early, I recommend clarifying that this fee would still be capped at the remaining value of the customer agreement. While this limitation is perhaps implied by the phrase "equivalent of *up to* one year of Rider subscription" (emphasis added), it would be made more clear by retention of

the clause "not to exceed the remaining value of the customer agreement."[18] This minor change would only affect customers seeking to unenroll when they have less than one year remaining in their Rider 19 subscription.

Q. You also mentioned that you would recommend providing additional flexibility with respect to pricing. What additional option do you recommend adding?

A. I recommend adding an option for customers to switch to a market-based rate for their base electricity schedule, to complement the structure of the Rider 19 renewable energy credits. This is the approach taken by Consumers Energy's Large Customer Renewable Energy Pilot (LC-REP) program, which includes a "Market Index Provision" allowing customers subscribing for at least 85% of their load to switch to a market-based rate.[19] The Market Index Provision allows customers to align their underlying electricity costs to the credits they get back from their renewable energy subscription. While the Market Index Provision and the LC-REP energy credit will not align perfectly, this arrangement reduces the market risk associated with the variable, market-based LC-REP credit. The structure of the subscription charge and renewable energy credits for the Rider 19 program is very similar to that of the LC-REP program, and addition of a market-based rate option would give DTE customers an attractive option to better manage the risk of their participation in Rider 19.

[18] Rider No. 19, at Section D (Early Termination of Agreement).

[19] Consumers Energy Company, Voluntary Large Customer Renewable Energy Pilot ("LC-REP") Program, C10.6, First Revised Sheet No. C-55, Oct. 28, 2020. https://www.michigan.gov/documents/mpsc/Consumers_14_current_675992_7.pdf

Q. Please summarize your recommendations regarding Rider 19.

A. I recommend that the Commission approve DTE's proposed revisions to Rider 19, with the following conditions:

1. When adding new resources to serve customer demand under Rider 19, rely on competitive solicitations that give fair opportunity to third-party developed resources;
2. Conduct an evaluation of DTE's approach to forecasting the five-year energy and capacity credit as part of the net premium approach to evaluating and cost-averaging new Rider 19 projects, and require that DTE provide information regarding the process and outcomes of the net premium evaluation to current and prospective Rider 19 customers;
3. Reverse the strikeout of the phrase "not to exceed the remaining value of the customer agreement" from the Rider 19 early termination provisions; and
4. Add an option for customers to switch to a market-based rate for their base electricity schedule, to complement the structure of the Rider 19 renewable energy credits (analogous to the Market Index Provision under Consumers Energy's LC-REP program).

Q. Does this conclude your testimony?

A. Yes.

17344301.2

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

****

In the matter, on the Commission's own motion, regarding the regulatory reviews, revisions, determination and/or approvals necessary for regulated electric providers to comply with Section 61 of 2016 PA 342.	)	Case No. U-20713
In the matter, on the Commission's own motion, regarding the regulatory reviews, revisions, determination and/or approvals necessary to fully comply with Public Act 295 of 2008.	)	Case No. U-20851 Consolidated

EXHIBITS OF
CAITLIN MARQUIS
ON BEHALF OF
THE MICHIGAN ENERGY INNOVATION BUSINESS COUNCIL,
INSTITUTE FOR ENERGY INNOVATION,
AND
ADVANCED ENERGY ECONOMY

CAITLIN MARQUIS

781.261.6047
cmarquis@aee.net

133 Federal Street, 7th Floor
Boston, MA 02110

PROFESSIONAL EXPERIENCE

Advanced Energy Economy — Boston, Massachusetts
Director — *October 2014 – Present*

- Plan and execute policy engagement for *Advanced Energy Buyers Group*, including:
  - Developing policy positions
  - Drafting regulatory comments (available at www.advancedenergybuyersgroup.org/policy-engagement)
  - Advancing legislative positions
  - Developing strategic plans, planning and facilitating meetings with members and external stakeholders
  - Coordinating and collaborating with allied groups
  - Managing consultant contracts, maintaining website, and other administrative tasks
  - Managing member relations
- Oversaw 2017 launch of *Advanced Energy Buyers Group,* an initiative within AEE supporting the policy interests of large energy consumers; active membership includes Microsoft, Amazon, Google, and Facebook
- Lead AEE engagement in ISO New England and support AEE's broader Expanding Wholesale Markets work, including stakeholder engagement, policy positioning, and comment filings at the Federal Energy Regulatory Commission
- Support AEE policy work by authoring and/or contributing to regulatory comments, reports, blog posts, webinars, panels, and member communications. Recent reports, articles, and filings include:
  - Renewable Energy Offerings that Work for Companies (April 2019 report)
  - How Corporate Demand can Drive Renewable Energy and Economic Growth, State by State (March 2020 webinar)
  - Understanding the MOPR: What an Obscure FERC Rule Could Mean for Renewable Energy Buyers (Smart Energy Decisions guest column, March 13, 2020),
  - Here's a Glimpse of What Distributed Energy Resources Could Bring to Wholesale Markets – If They Are Given a Chance (September 2019 blog post)
  - Virginia Case No. PUR-2019-00094, Direct Testimony (October 2019 filing)
  - Colorado Proceeding No. 19M-0495E, Advanced Energy Buyers Group Comments (November 2019 filing)

Altenex — Boston, Massachusetts
Research Analyst — *September 2011 – July 2012*

- Researched environmental goals of multinational corporations, renewable energy developments, industry trends, and government incentives and regulations; compiled and presented results
- Designed and built database of renewable energy projects, developers, and purchasers; used database to inform research and client-facing proposals
- Helped to determine and sharpen the focus of a rapidly growing renewable energy startup

EDUCATION

OXFORD UNIVERSITY, *MSc. with Distinction, November 2013* — *Oxford, United Kingdom*

MSc. Environmental Change & Management, focus on sustainable building design & occupant behavior. Coursework in science and policy of climate change, resource use, ecosystems, and sustainable development.

HARVARD UNIVERSITY, *summa cum laude, May 2010* — *Cambridge, Massachusetts*

A.B. History of Art & Architecture, focus in Architectural History & Theory; language citation in Spanish. John Temple Hoopes prize for outstanding undergraduate thesis. Phi Beta Kappa. Cumulative GPA: 3.945

M.P.S.C. No. 1 – Electric
DTE Electric Company
(Update of Rider 19)

_____ Revised Sheet No. D-117.00
Cancels _____ Sheet No. D-117.00

STANDARD CONTRACT RIDER NO. 19 *MIGREENPOWER –* LARGE CUSTOMER VOLUNTARY GREEN PRICING PROGRAM ~~(LCVGP) PILOT~~

The MIGreenPower Large Customer Program (Rider) ~~LCVGP~~ provides full service customers the opportunity to meet their corporate sustainability goals and to encourage additional development of Michigan-sourced renewable energy resources. ~~by offering the ability to match up to 100% of their total annual energy usage.~~

The Company will supply the renewable energy from ***both Company renewable assets approved in its Renewable Energy Plan (REP) by the Commission's Order in Case No. U-18232 issued July 18, 2019 ("Original Assets") and additional*** ~~designated~~ renewable energy ***projects ("Additional Projects") deemed necessary to meet forecasted customer demand for this Rider (collectively "Company Renewable Resources"). The MIGreenPower Large Customer Program*** ~~facilities in the state of Michigan. LCVGP~~ will be ***sourced from the Original Assets*** ~~subscribed in phases~~ until ***they are*** ~~one offering is~~ fully subscribed and there is ***forecasted demand for additional projects*** ~~demand for additional phases. Renewable energy supplied under this option will be limited to 85% of the total forecasted annual energy output of the contracts approved under the LCVGP~~. Renewable energy subscribed through this Standard Contract Rider No. 19 shall not be used by the Company for compliance with the state's statutory renewable energy portfolio requirements. ~~Enrollment will, with conditions and subject to availability, remain open following approval by the Michigan Public Service Commission, and additional designated renewable energy facilities will be added, as subscription levels increase.~~

Customers that receive at least 50% of their average monthly energy ***from Company Renewable Resources*** will be exempt from paying the Company's renewable energy surcharge. Customers that receive less than 50% of their average monthly energy will be responsible for the full applicable renewable energy surcharge.

Company-Provided Renewable Resource

A. Customer Eligibility

Participation is limited to full service customers with an aggregated annual Maximum Demand of at least 1,000 kW. A single customer may aggregate across multiple sites. ~~Participants shall be enrolled on a first-in, first-served basis~~ and matching energy shall not exceed the limits of the amount of renewable energy available. ***Customers*** ~~After the initial year of the subscription, customers~~ may increase their subscription level annually for the remainder of their agreement, based on the availability of renewable energy ***in the Company's Renewable Resources,*** as determined by the Company.

The Company shall transfer to the customer, via the Michigan Renewable Energy Certification System (MIRECS), the Renewable Energy Credits (RECs) or retire the RECs on behalf of the subscribing customers, using the MIRECS accounting system. ***If the customer elects for the Company to retire the RECs on their behalf, the Company will provide the customer with a sworn attestation and reporting for all RECs that were retired. The REC retirement reporting and attestation will occur annually during the month of April for the RECs that were generated throughout the prior calendar year.*** If a customer's subscribed energy is in excess of the monthly output from the ***Company's Renewable Resources*** ~~designated renewable facilities~~, then the Company will record the shortfall and attempt to satisfy the shortfall with renewable generation in excess of customer subscriptions in future months. The Company will conduct annual reviews to reconcile the energy generated by the ***Company Renewable Resources*** ~~designated renewable facilities~~ against the amount of renewable energy subscribed by participants. If the annual review demonstrates that the ***Company Renewable Resources*** ~~renewable facilities~~ have a shortfall in output versus total subscription, then the Company will provide, at the customer's option, RECs in an amount that satisfies the customer's share of the shortfall. The

M.P.S.C. No. 1 – Electric
DTE Electric Company
(Update of Rider 19)

_____ Revised Sheet No. D-117.00
Cancels _____ Sheet No. D-117.00

Company will charge customers the cost of acquiring the RECs on their behalf. ***The Company will apply the applicable credits to the customer's bill following the annual review.***

The customer subscription level is expressed as a percentage of their monthly energy use. The Company will provide at least 15% renewable energy under current PA 342 legislation in 2021. ***Customers*** ~~Therefore, minimum participation match is 20% of monthly energy use for each enrolled customer account and customer~~ may select ***under this Rider,*** ~~participation levels~~ in 5% increments, up to ***85*** ~~100~~% of their total energy use***, with the maximum resulting in 100% renewable energy supply*****.** The customer's subscription charge is a per kWh monthly charge applied to the portion of energy of the customer's account designated to participate in ***the MIGreenPower Large Customer Program*** ~~the LCVGP~~ and is designed to fully recover the costs of participation.

(Continued on Sheet No. D-118.00)

M.P.S.C. No. 1 – Electric
DTE Electric Company
(Update of Rider 19)

_____ Revised Sheet No. D-118.00
Cancels _____ Sheet No. D-118.00

(Continued from Sheet No. D-117.00)

STANDARD CONTRACT RIDER NO. 19 (Contd.) ***MIGREENPOWER –*** **LARGE CUSTOMER VOLUNTARY GREEN PRICING PROGRAM ~~(LCVGP) PILOT~~**

B. Monthly Rate

Billing and Credits

a. The customer taking service under this Rider shall be subject to the Power Supply and Delivery charges pursuant to their current Rate Schedule, including all applicable surcharges and credits contained in Sections C8.5 and C9.8, for all electric service provided by the Company, including ***renewable*** energy purchased under this Rider. ***Services under this Rider require the rate schedule attached to the Rider to*** ~~The customer will~~ be billed on ***a calendar month*** ~~their current~~ billing cycle ***which begins on the first calendar day of each month and ends on the last calendar day of each month***.

b. Subscription Charge: The subscription charge will be ~~a flat fee,~~ based on the levelized cost of ~~service of~~ the ***Original Assets*** ~~designated renewable energy facilities approved~~ within ***this Rider*** ~~the Program~~. If ***Additional Projects are required to meet customer demand, they*** ~~new assets in the program are contracted at a lower rate, the subscription fee~~ will be ***cost-***averaged ***based on generation into the Original Assets based on a five-year forecasted*** ~~for all subscibers, resulting in a~~ net ***premium (levelized cost less forecasted energy and capacity credits) at the time of the Additional Project(s) contract approval.*** ~~decrease in the subscription fee for all customers.~~ If ***Additional Projects*** ~~new assets in the program~~ are contracted at a higher ***net premium*** ~~rate or at the request of a specific customer~~, then ***existing subscribers will not be billed for those Additional Projects and will*** ~~customers currently paying a lower amount would~~ retain ***their existing subscription fee and capacity and energy credit*** ~~that amount for the amount they are currently subscribed for~~.

c. Flexible Pre-Payment Option: In order to accommodate unique customer needs, customers under this Rider may elect a flexible upfront subscription payment instead of paying the per kWh subscription charge on a monthly basis. The Company will require, at minimum, a payment that is estimated to cover the customer's expected subscription expenses that are tied to the subscription charge of the Company's Renewable Resources in any given month. Any such upfront subscription charge is not a customer deposit described in the billing practices applicable to non-residential electric customers (R 460.1607). When the upfront subscription payment no longer covers the customer's monthly subscription expenses, either the customer can make another upfront payment or the customer will be billed on a monthly basis going forward.

d. Renewable Energy Resource Credits:

Energy Credit

The customer will receive a monthly energy credit based on the ***monthly weighted*** ~~monthlyweighted~~ average Real Time Locational Marginal Price (RT-LMP) for the Generation Node(s) of the ***Company Renewable Resources*** ~~designated renewable facilities~~ applied to the ***customer's*** ~~customers~~ monthly energy use under the ***Rider*** ~~program~~. Credits will be reconciled annually based ***on the Mid-Continent Independent System Operator (*** ~~against the~~

Issued _____
C. Serna
Vice President
Regulatory Affairs

Detroit, Michigan

Effective for service rendered on and after _____

Issued under authority of the Michigan Public Service Commission dated _____ in Case No. U-20713

M.P.S.C. No. 1 – Electric
DTE Electric Company
(Update of Rider 19)

_____ Revised Sheet No. D-118.00
Cancels _____ Sheet No. D-118.00

MISO***)*** settled RT-LMP at the assigned Generation Node(s). The annual reconciliation will be completed by the end of ***April*** ~~March~~ for each proceeding ~~Program~~ year.

Capacity Credit

The customer will be provided a monthly capacity credit based on the customer's renewable energy subscription under this ***Rider*** ~~Program~~ and the value of the Zone 7 Auction Clearing Price in the annual MISO Planning Resource Auction for the planning period, as determined by the Company.

(Continued on Sheet No. D-119.00)

Issued _____
C. Serna
Vice President
Regulatory Affairs

Detroit, Michigan

Effective for service rendered on
and after _____

Issued under authority of the
Michigan Public Service Commission
dated _____
in Case No. U-20713

(Continued from Sheet No. D-118.00)

STANDARD CONTRACT RIDER NO. 19 (Contd.) ***MIGREENPOWER –*** **LARGE CUSTOMER VOLUNTARY GREEN PRICING PROGRAM ~~(LCVGP) PILOT~~**

The ***capacity credit***~~auction clearing price~~ will be calculated on a per MWh basis using the formula below. ***The MISO Zone 7 Effective Load Carrying Capability (ELCC) will be utilized to calculate the capacity credit.*** The annual MISO capacity auction takes place in March with the revenue from system capacity being updated for the next twelve months beginning June 1st of each year.

(Auction Clearing Price***)*(***~~) □(~~365 Days***)*(***~~) □(~~MISO Zone 7 ***ELCC (%))*(Project Size***~~Capacity Credit~~ (MW))
___
(Project Size ***(MW))*(***~~) x (~~Resource NCF***)*(8,760***~~) □(8760~~ hours)

The Energy and Capacity Credits shall be paid to the customer via bill credit only.

C. Term & Form of Agreement

The ***Rider***~~Program~~ shall require a written agreement with the customer ***with standard contract terms***~~for a term~~ of five (5) years, ten (10) years, ***fifteen (15) years,*** or twenty (20) years. The ***Rider***~~Program~~ term and billing will begin the first billing cycle after the latter of the commercial operation date of the designated renewable energy facility or the Effective Date of the customer ***agreement***~~Agreement~~. After the first ***Rider***~~Program~~ year and beginning on ***a semi-***~~an~~ annual basis thereafter, the customer may increase ***Rider***~~Program~~ subscription levels, subject to ***Rider***~~Program~~ availability. The term of the agreement will not be affected if the subscription level increases. Customers ***shall***~~will~~ notify Company of ***their*** intent to renew their agreement sixty (60) days in advance of the end of the ***existing contract*** term.

If no notice of intent is given, the customer agreement will expire at the end of the term. If the customer elects to re-enroll in the ***Rider***~~Program~~ after their agreement term ends, that customer will enroll at the subscription rate available at the time of renewal.

D. Early Termination of Agreement

The customer may elect to terminate their ***Rider*** subscription ***at any time***~~after the initial year~~, subject to an early termination fee. The termination fee will be ***equivalent of up to one year of Rider subscription fees,*** calculated ***using the customer's previous 12 months usage data multiplied by***~~based on~~ the ***subscription fee agreed upon in*** ~~terms of~~ the ***customer's contract.***~~agreement, not to exceed the remaining value of the customer agreement.~~ If the customer ~~or Company~~ is able to transfer the level of subscription to another customer that meets the eligibility requirements, the termination fee will be waived. Customers who choose to terminate or transfer their ***Rider***~~Program~~ subscription will be required to give the Company ***one hundred twenty (120) days***~~a sixty (60) day~~ written notice. If the customer would like to re-enroll in the ***Rider***~~Program~~ after termination, they will be eligible, subject to the ***Rider's***~~Program's~~ availability ***and current subscription fee.***

LATE PAYMENT CHARGE:

See Section C4.8.

MPSC Case No.: U-20713
Requestor: EIBCIEIAEE
Question No.: EIBCIEIAEEDE-2.2]
Respondent: B. T. Calka
Page: 1 of 1

Question: The Company proposes to change the way it would cost-average new projects into the subscription charge. Please provide an example or equation illustrating how customer subscription costs would be calculated as new resources are added under the current LCOE-based approach and the proposed net premium approach for cost-averaging new projects into the program.

Answer: Please see the illustrative example below of how customer subscription costs would be affected by a new asset with, for example, a $55/MWh LCOE and a $45/MWh credit. The assumed cost and credit of the existing asset is $50/MWh with a $30/MWh credit. The assumed capacity factor is the same for both existing and new assets.

Existing Asset (100 MW)
LCOE: $50/MWh
Credit: $30/MWh
Premium: $20/MWh

New Asset (100 MW)
LCOE: $55/MWh
Credit: $45/MWh
Premium: $10/MWh

Current Approach
- No change to Rider
- New asset is not cost-averaged in as LCOE is higher, and existing net premium remains $20 MWh
- New enrollments realize a net premium of $10/MWh

New Approach
- Rider is changed
- Everyone, including both existing and new enrollments, realize a net premium of $15/MWh

Attachments: None.

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION
* * * * *

In the matter, on the Commission's own motion, regarding the regulatory reviews, revisions, determination and/or approvals necessary for regulated electric providers to comply with Section 61 of 2016 PA 342.	)	Case No. U-20713
In the matter, on the Commission's own motion, regarding the regulatory reviews, revisions, determination and/or approvals necessary to fully comply with Public Act 295 of 2008.	)	Case No. U-20851 Consolidated

PROOF OF SERVICE

STATE OF MICHIGAN)
) ss.
COUNTY OF INGHAM)

Sarah E. Jackinchuk, the undersigned, being first duly sworn, deposes and says that she is a Legal Assistant at Varnum LLP and that on the 23rd day of December, 2020 she served the Services List via email, Direct Testimony and Exhibits of Dr. Laura Sherman and Caitlin Marquis on behalf of the Michigan Energy Innovation Business Council, the Institute of Energy Innovation, and Advanced Energy Economy.

Sarah Jackinchuk

Digitally signed by: Sarah Jackinchuk
DN: CN = Sarah Jackinchuk email = sejackinchuk@varnumlaw.com C = US O = Varnum OU = Varnum
Date: 2020.12.23 14:12:22 -05'00'

Sarah E. Jackinchuk

SERVICE LIST MPSC CASE NO. U-20713 and U-20851 Consolidated

Administrative Law Judge
Hon. Martin Snider
Administrative Law Judge
Michigan Public Service Comm.
sniderm@michigan.gov

Counsel for Michigan Public Service Commission Staff
Nicholas Taylor
Amit T. Singh
Cody Matthews
Taylorn10@michigan.gov
singha9@michigan.gov
matthewsc4@michigan.gov

Counsel for DTE Gas Company
Lauren D. Donofrio
Paula Johnson-Bacon
Lauren.donofrio@dteenergy.com
Paula.bacon@dteenergy.com
mpscfilings@dteenergy.com

Counsel for City of Ann Arbor, Michigan Municipal Association for Utility Issues
Valerie J.M. Brader
valerie@rivenoaklaw.com
ctd@rivenoaklaw.com
ecf@rivenoaklaw.com

Counsel for Soulardarity
Nick Leonard
Robert A. Weinstock
Mark N. Templeton
Rebecca J. Boyd
Nicolas.leonard@glelc.org
rweinstock@uchicago.edu
templeton@uchicago.edu
Rebecca.j.boyd@gmail.com

Counsel for Natural Resources Defense Council, Michigan Environmental Council
Lydia Barbash-Riley
Christopher M. Bzdok
Kimberly Flynn
Karla Gerds
Breanna Thomas
lydia@envlaw.com
chris@envlaw.com
Kimberly@envlaw.com
karla@envlaw.com
breanna@envlaw.com

Counsel for Pine Gate Renewables LLC
Jennifer Utter Heston
jheston@fraserlawfirm.com

Counsel for Energy Michigan, Inc.
Justin K. Ooms
Timothy J. Lundgren
jkooms@varnumlaw.com
tjlundgren@varnumlaw.com

Counsel for Association of Business Advocating Tariff Equity (ABATE)
Brian A. Brandenburg
Michael J. Pattwell
Stephen A. Campbell
bbrandenburg@clarkhill.com
mpattwell@clarkhill.com
scampbell@clarkhill.com

Counsel for Environmental Law & Policy Center; Vote Solar; The Ecology Center; Solar Energy Industries Association
Margrethe Kearney
mkearney@elpc.org
rlazer@elpc.org
MPSCDocket@elpc.org

Counsel for Great Lakes Renewable Energy Association
Don L. Keskey
Brian W. Coyer
donkeskey@publiclawresourcecenter.com
bwcoyer@publiclawresourcecenter.com