MI Power Grid: New Technologies and Business Models
Comments on Draft Report

Introduction

The Michigan Energy Innovation Business Council and Advanced Energy Economy (collectively "Michigan EIBC/AEE") appreciate the opportunity to provide comments on the draft report entitled "Michigan Public Service Commission Staff Report: U-20898 MI Power Grid: New Technologies and Business Models Workgroup" ("Draft" or "Draft Report"). We appreciate the Michigan Public Service Commission's ("MPSC" or "Commission") efforts to maximize the benefits of the transition to clean, distributed energy resources for Michigan residents and businesses through the MI Power Grid Initiative, and also the considerable time and effort that Staff have put into this workgroup and Draft Report.

Michigan EIBC/AEE recognize the critical role that new technologies and business models will play in the energy transition and have participated throughout this workgroup. As outlined below, our comments provide context and identify potential issues with the framing of selected topics, including the behind-the-meter solar and microgrids sections of the Draft Report, and address concerns we have around some of the recommendations Staff provides in Section 11.

Comments

General Comments

While not a focus of the New Technologies and Business Models Work Group, Michigan EIBC/AEE believe it is important to note the role that fuel cells can serve as the Commission considers new technologies to integrate into utility planning processes and grid modernization. A fuel cell is a non-combustion technology that uses an electro-chemical process to generate power with significantly lower levels of emissions when fueled with natural gas and no emissions at all when fueled with hydrogen. Fuel cells, with their unique ability as a distributed resource to produce reliable and low or no-emissions baseload generation, can play an important role in utility NWA portfolios and distributed resource planning. Overall, we believe that there is value

in considering the costs and benefits of fuel cells as the Commission seeks to develop a clean, reliable grid in the state of Michigan.

4.1 Behind-the-Meter Solar

On page 20 in Section 4.1.2, the Draft Report outlines several areas that were discussed throughout the workgroup as major hurdles to the development of behind-the-meter (BTM) solar projects. These hurdles are then discussed in detail separately. However, the Draft Report fails to list the 1% program cap as a major hurdle, although the cap was one of the biggest barriers discussed during the workgroup and is the top item on the summary table. This hurdle is briefly discussed as part of section 4.1.2-5, but only as a seeming afterthought to a discussion on the inflow/outflow tariff. Although there is no current regulatory solution to this hurdle, Michigan EIBC/AEE believe that the statutory limit on the distributed generation (DG) program should be one of the discussed major hurdles. To exclude the 1% program cap from the discussion on hurdles would result in a failure to fully describe the issues limiting BTM solar development in the context of Michigan's current legislative framework.

5. Combined Heat and Power

5.2.1-1 Renewable Natural Gas and Other Low Carbon Fuels Can Reduce CHP Emissions

Michigan EIBC/AEE have concerns that this section does not fully account for the non-carbon dioxide emissions that CHP can still produce. Due to the combustion processes that generate power in CHP, pollutants such as NOx and PM are still produced in tandem with carbon dioxide. As the Commission considers this technology in its pursuit of a modern, clean electricity system, we believe it is important that the public health costs of these additional pollutants are considered as the Commission begins the process of developing a comprehensive benefit-cost analysis framework for this technology.

8. Microgrids

8.2.4 Need for Experimentation and Large-Scale Exploration

On page 78, Michigan EIBC/AEE agree with Staff on the importance of experimenting and studying microgrids on a large scale and encourage the Commission to examine how the rules and regulations they are implementing can affect the development and implementation of

microgrids. Michigan EIBC/AEE believe that the Commission is in a position to help drive the growth of microgrids among utilities. In its Distribution Grid Plan (DGP), submitted in Case No. U-20147, DTE Electric demonstrates the cost-effectiveness of a planned solar-plus-storage microgrid pilot at its Port Austin substation. The proposed pilot, which includes a 500kW solar installation and 1MW-4MWh battery, is expected to save the Company approximately $10 million compared to traditional grid upgrades.[1] We see the cost-savings from this pilot as an indicator that microgrids could be an effective solution on many circuits in Michigan to improve resilience and defer traditional grid investments.

This pilot also clearly shows the connection between new technologies and business models that this workgroup was meant to address. Under the traditional cost-of-service model, the utility has greater financial incentive to deploy a more capital-intensive solution, and also has the incentive to pursue direct ownership of assets. However, the procurement of services that could be an important feature of some types of microgrid configurations could be more cost-effective and bring additional benefits to customers. Specifically, microgrids can act as an useful service to utilities in the event of widespread outages for residential customers. In the event of an outage, residential microgrids that incorporate demand response can curtail demand from HVAC, water heaters, and connected appliances to ease demand on the grid and allow for greater control of certain residential load, allowing the system to come back online faster and safely. When these services are correctly valued by utilities, single-family and multi-family property owners are incentivized to build out these technologies, as their investments can be returned through sufficient cost recovery mechanisms. Specifically, developing incentive structures to incorporate master metering and submetering in multi-family properties would allow utilities to take advantage of the many different appliances and systems within these properties through curtailment during an outage. With these investments, tenants can receive the benefits that come with greater reliability and enhanced energy control, while utilities are given another tool to minimize the duration and severity of outages on the distribution network.

[1] DTE Electric DGP p. 399 Available at: https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t000000RUqKjAALv

With the upcoming implementation of FERC Order 841 and Order 2222, Michigan EIBC/AEE believe that microgrids also have a role to play in utility planning processes. This suite of technologies has the potential to present cost-effective non-wire alternatives to many of the traditional grid hardening investments proposed in DTE Electric's DGP and Consumers Energy's Electric Distribution Infrastructure Investment Plan. With the opportunity for technologies incorporated into microgrids to participate in wholesale markets, we encourage the Commission to consider how it can create a regulatory framework that allows for an expeditious growth of this technology in order to save ratepayer dollars and improve grid resiliency.

11. Staff Recommendations

11.1 Commission Guidance on Just Rates

On page 90, the Draft Report states that many non-quantifiable, non-energy benefits of examined technologies may have sustainability, resilience, equity, and economic impacts that are currently not included when making regulatory decisions regarding approvals of utility projects and programs. Although the Draft Report states the importance of including these issues in regulatory decisions, it should also note how and within which regulatory procedures the Commission could advance consideration of these issues.

In addition, the Draft Report indicates that the State of Michigan's Environmental Justice Response Team is "developing an Environmental Justice screening tool to help identify areas of concern using environmental data and health impacts." We encourage the Commission to adopt such a tool upon its completion and continue to develop pathways to quantify other non-energy benefits. We encourage the Commission to explore other measurement tools, like the equity measurement framework being developed by the Energy Equity Project at the University of Michigan.[2]

It is clear, as stated throughout Section 11.1-3, that extreme weather and associated outages can create detrimental impacts on education, health, and finances, especially for low-income

[2] See presentation by Justin Schott at the August 25, 2021 meeting of the Customer Education and Participation Workgroup. Available at https://www.michigan.gov/mpsc/0,9535,7-395-93307_93312_93593_95590_95594_95685-508655--,00.html.

households. Michigan EIBC/AEE appreciate the Commission's recognition of these issues and the need to harden the grid to prepare for a changing climate and more severe weather patterns.[3] However, the existing framework for outage credits, as referenced in the August 25, 2021 special Commission meeting, is insufficient to make up the economic costs of these sustained outages for low-income and disadvantaged families. We encourage the Commission to continue to focus on establishing adequate outage credits. In addition, it is important that the Commission establish a framework for performance-based regulation (PBR) that appropriately incentivizes improved reliability, especially for the most vulnerable Michiganders.

11.2 Commission Benefit Cost Analysis Guidance is Needed

Michigan EIBC/AEE have been involved in many discussions with the Commission, Staff, and other stakeholders regarding benefit cost analysis (BCA) through several distribution system planning workgroups. We look forward to the continuation of these discussions in fall/winter of 2021 and will plan to participate. As part of those discussions, we agree with Staff that methods to quantify and include potential negative externalities in BCA, including those that impact the environment and public health, should be discussed.

Despite the importance of BCA, it is critical that the requirement to conduct BCA for future pilot programs (as suggested in the Staff Recommendations) not be construed to mean that pilot programs must produce immediate net economic benefits for customers. According to the Commission's Order on pilots, "[a] pilot is a limited duration experiment or program to determine the impact of a measure, integrated solution, or new business relationship on one or more outcomes of interest."[4] Although the Commission then lists a number of criteria for a pilot program, none of those criteria are that the pilot should produce immediate net economic benefits to customers. These criteria should be taken into consideration prior to the approval of a permanent program. However, given that pilots are conducted to test new solutions, new technologies, or new business models, requirements related to certain BCA outcomes would severely limit the feasibility of many pilot programs.

[3] See comments from AEE/Michigan EIBC in Case No. 21122. September 24, 2021. Available at https://mi-psc.force.com/s/filing/a00t000000RZr5aAAD/u211220023.
[4] Commission Order in Case No. U-20645. February 4, 2021.

As Staff prepares the final version of this report, we encourage the inclusion of recommendations to the Commission regarding BCA that go beyond pilots. The discussion of BCA in sections 11.2-1 through 11.2-3 are most applicable to utility activities more generally and not to pilots. With that in mind, and considering our aforementioned comments related to pilots, we also ask that Staff consider recommendations on BCA related to pilots that are focused on understanding the potential of the solution being piloted, in the event that it moves beyond the pilot stage.

11.3 Require Data Driven Decision Making

Michigan EIBC/AEE strongly agree that third parties should have increased access to reliable data. To ensure that solutions are the most cost-effective and most beneficial to customers, it is essential that all involved parties and potential solution-providers have access to appropriate data (including data that is both timely and at the needed level of granularity). It is also important to ensure that if a utility affiliate has access to such data, per Code of Conduct regulations, third parties must also have access to the same data.

Michigan EIBC/AEE encourage Staff to specifically outline how the Commission might be able to "ensure 3rd party access to utility data in a secure, timely, and ongoing manner." As was expressed during the workgroups, even if these data are shared, sometimes they are not provided in a readily accessible format or in an organized manner. Other times there are several unreasonable barriers to clear prior to gaining access to the necessary data. Guidelines from the Commission could help to ensure that this recommendation is achieved. Staff and the Commission could look to New York's ongoing proceeding on creating a uniform statewide Data Access Framework and Integrated Energy Data Resource to better understand the range of issues that need to be addressed when considering how to improve data access.[5]

11.4 Support Agility and Flexibility in Testing & Finding Energy Solutions

Michigan EIBC/AEE are concerned about the proposed expedited review process for pilots proposed in the Draft Report. Specifically, the involvement of stakeholders, including consumer

[5] Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data. Available at: https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterSeq=61981&MNO=20-M-0082.

advocates, in the pilot development and approval process is incredibly limited. The referenced example from Hawaii requires the development and review of a workplan wherein utilities, the Commission, the Consumer Advocate, and interested stakeholders identify 5-10 areas for pilot collaboration. Pilots that fit into the described pilot projects and goals in the workplan are then eligible for the expedited process.

In contrast, the proposed process for Michigan involves almost no upfront stakeholder engagement and no ability for stakeholders to comment once the proposal is submitted to the Commission. The business model and new technology questions that may be explored through pilot programs are not insignificant and may be incredibly impactful on customers and third parties. It is unreasonable to give Michigan's utilities what amounts to a blank check of up to $3 million per pilot to test a very wide range of questions with almost no stakeholder review and very limited Commission review. These kinds of "small" pilots can easily be, and often are, conducted already by utilities without ratepayer funding and lengthy Commission review. There is no need to remove the appropriate review processes that already exist in the current contested case filing structure.

11.5 Support Development of Alternative Business and Ownership Models

Michigan EIBC/AEE appreciate Staff's acknowledgement in the Draft Report of the concerns regarding monopoly utility ownership of assets BTM. We are concerned, however, that the questions asked in the Draft Report (p. 112) are biased and leading. Specifically, "The current legal and regulatory structure for utilities to own solar generation behind the customer's meter" implies that it would currently be legal to do so. Michigan EIBC/AEE have argued in several contested cases, including Case No. U-20649 and Case No. U-20693, that utility ownership of BTM assets is not legal, having not been specifically allowed by the legislature (despite, for example, the specific allowance of utility Value Added Programs and Services). If the Commission does open a comment proceeding, we encourage the Commission to reference the record in those previous cases, and to not frame that proceeding in the same manner as the Draft Report.

If the Commission were to open a comment proceeding to consider the legal and regulatory issues related to utility ownership of BTM DERs, we would encourage the Commission not to concurrently allow utility pilots to explore utility ownership of BTM DERs. Given that reasonable arguments exist to question the legality of such ownership, allowing the utilities to test whether they can, in fact, benefit financially by outcompeting third parties does not seem appropriate or reasonable. As such, Michigan EIBC/AEE opposes this recommendation in the Draft Report and recommends its removal given that the first recommendation is to study these issues through a comment proceeding. We offer the following edits to the list of issues Staff has included at the top of page 112:

- Establish a comment proceeding to consider the appropriate role of utilities with respect to ~~legal and regulatory barriers to utility ownership of~~ behind the meter distributed energy resources, including the following questions/issues:
    - Whether or not third-party community solar fits in the current regulatory framework,
    - The legal and regulatory barriers for a third party to sign customers up, charge a per kWh subscription fee, pay a per kWh subscription credit outside of the utility framework,
    - Whether or not there exists a current legal and regulatory structure for utilities to own solar generation behind the customer's meter,
    - Legal prohibitions preventing a utility from owning and rate-basing technologies located behind the customer's meter, and
    - The risk or liability associated with putting batteries behind the customer meter.
- ~~Support exploration of alternative business and ownership models by requesting utility pilots in this area, and~~
- ~~Request the offering of comparable, parallel third-party pilot or tariff, either separately or within the same pilot or tariff, where feasible in recognition of frequent third-party innovations that may result in cost savings, system benefits, and alternative business and ownership model learnings. Such third-party pilots or tariffs are envisioned to be facilitated by the utility, which selects the third-party through a competitive process, and~~

~~provides the necessary data and at the needed frequency for the third-party to conduct and evaluate the pilot.~~

In addition, Michigan EIBC/AEE agree with Staff that "The role of the utility as a platform orchestrator is likely the path forward (Bolino, 2021)." We note that this vision for the utility would be consistent with a market structure where utilities do not own BTM assets, but rather provide an intelligent platform on which such assets, owned by customers and third parties, play an active role in meeting grid needs. Such a structure still provides for value creation for utilities but without the need to own BTM assets. In fact, earlier in the Draft Report Staff draws the connection between the platform/"facilitation" business model with performance-based ratemaking. The New York PSC has attempted to get this model off the ground through the REV process, with some success to date, and Hawaii is in the process of implementing a comprehensive PBR regulatory framework. These two states demonstrate that numerous related policy underpinnings are needed to support this model, such as clear rules for utility ownership of DERs, services to be provided by third parties on the "platform," and the outcomes that would be subject to financial rewards or penalties. Nevertheless, we believe this model is an important opportunity to align utility earning opportunities with third-party providers and customer interests to incentivize changes that break the capital bias and align the utility business model with achieving public interest goals. This is a more appropriate framing for any comment proceeding.

11.6 Develop Technology and Fuel Agnostic Incentives

The Draft Report rightly identifies cost as a barrier to customer adoption of energy-saving and/or clean technologies. Offering rebates, grants, tax credits, or other forms of financial support, as the Report suggests, can accelerate the acceptance of and benefits from energy solutions that can save consumers money and improve overall system reliability, while also meeting state energy policy goals.

Regarding Technology and Fuel Agnostic Incentives, Michigan EIBC/AEE agrees with Staff that crafting financial support "based on holistic policy goals" to "allow optimization and selection" is appropriate. However, we recommend the reconsideration of the characterization of natural

gas (see p. 113). While CHP and other efficient technologies can certainly contribute to meaningful GHG emissions reductions, it is not a "misconception" to describe natural gas as "dirty," although we prefer a more objective assessment. Governor Whitmer issued Executive Directive (ED) No. 2020-10[6] acknowledging the harms of fossil fuels and committing Michigan to achieving economy-wide carbon neutrality by 2050. This ED effectively defines the "holistic policy goals" that the Commission is indeed striving for with the MI Power Grid process and numerous other proceedings. How natural gas use in Michigan evolves in the context of the 2050 decarbonization goal is complex and multi-faceted and may indeed warrant specific attention by the Commission.

Nevertheless, we agree with Staff that it is prudent to enable short-term financial support to develop key technologies and markets so that consumers and system operators can access and leverage various benefits and services, but that this should be done with these larger policy goals in mind. In the longer term, in line with cost-of-service principles, we support ensuring that there is a consistent application of rate design across solution types. For example, moving to rate designs that are broadly applicable to different types of DERs is preferable to rate designs customized to individual technologies.

11.7 Create Financing Methods for Customer Flexibility, Inclusion, and Ease

Low-and-moderate-income (LMI) households are especially at-risk for energy-insecurity and often underserved by traditional utility residential demand-side management programs. Identifying viable solutions that help consumers better manage their energy needs and save on utility costs is critical. The financing recommendations from Staff should only be considered as preliminary options that warrant further consideration within the context specific to Michigan consumers. Financing can be a useful tool for residents to overcome the upfront costs of some clean energy solutions, but these programs should prioritize transparency and consumer protections. We support the Staff recommendation to further explore on-bill tariff pilots for residential and commercial customers. This is an opportunity to identify best practices that will

[6] Executive Directive No. 2020-10: https://content.govdelivery.com/attachments/MIEOG/2020/09/23/file_attachments/1553296/ED 2020-10 Carbon_Neutral_Goal.pdf.

protect Michigan's vulnerable communities and effectively expand access to the benefits of DERs.

Regarding the reference to the forthcoming MI Power Grid workgroup on Financial Incentives and Disincentives (p. 116), it is our understanding that this refers to utility financial incentives tied to the underlying utility business model.[7] However, this section of the Draft Report is focused on incentives and financing methods for customers to adopt DERs and other solutions. While the two issues are connected, we ask that Staff clarify how the subject of section 11.7 in the Draft Report connects to this future MI Power Grid workgroup.

Conclusion

Michigan EIBC/AEE appreciate the opportunity to participate in this Workgroup and provide comments on Staff's Draft Report. We hope our comments can provide Staff with more context and understanding around concerns correlated to creating a fair and competitive marketplace as it relates to BTM ownership, data access, and any proposed expedited pilot process. We believe it is critical to allow third parties to participate in fair and equal marketplaces to ensure that ratepayers have access to cost-effective energy solutions and that all technologies are considered as the Commission works to create a clean, reliable grid in Michigan. We look forward to continuing to work with Staff and the Commission on these issues in upcoming proceedings and MI Power Grid workgroups.

[7] The description of this workgroup is as follows: Utility companies make money by earning a return on investments in new infrastructure, like power plants, poles, and wires. By pursuing alternatives to utility-owned infrastructure, such as power purchase agreements, reducing customer energy use through efficiency measures, or shifting energy use to times when electricity costs less to produce, there may be cost savings. Financial incentives provide an ability for utilities and customers to share in these savings, while disincentives may be appropriate if utilities are unable to achieve an expected level of performance.