STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's own motion, to open a docket for certain regulated electric utilities to file their distribution investment and maintenance plans and for other related, uncontested matters.	)	Case No. U-20147

Introduction

The Michigan Energy Innovation Business Council ("Michigan EIBC") and Advanced Energy Economy ("AEE"; collectively "Michigan EIBC/AEE") appreciate the opportunity to file comments in response to the Commission's September 8, 2022 Order ("Order") in the above-referenced proceeding. In that Order, the Commission addresses a number of interrelated topics and specifically asked for stakeholder input regarding appropriate metrics for the incorporation and integration of distributed energy resources ("DERs") into future distribution plans.[1] The Commission noted that reliability, while important, is not the only metric worthy of consideration when it comes to distribution system performance. We agree and further assert that the DER incorporation and integration are particularly well suited for consideration in a performance metrics plan. Furthermore, we agree with the Commission observation that Michigan's distribution grid is not yet ready for the anticipated influx of DERs, including electric vehicles.[2] Lastly, we agree with the Commission that the information that the utilities have filed to date in their distribution plans regarding the issue of financial incentives and penalties is insufficient.[3]

We view these issues identified by the Commission as being closely connected; in particular, a discussion of DER-related performance metrics should also include a discussion of financial incentives and penalties. While we understand the Commission intends to discuss the issue of incentives and penalties in an upcoming MI Power Grid workgroup,[4] we include this topic in our comments below regarding performance metrics for DERs in the hopes that it can further inform the scope of that forthcoming discussion.

[1] Order at page 70.
[2] Order at page 67.
[3] Order at page 71.
[4] Order at page 71.

Performance metrics overview

Michigan EIBC/AEE have long supported the use of appropriate performance-based metrics to drive utility actions that provide net benefits to customers, that are aligned with state policy goals, and that improve cost efficiency and levels of service in a way that is economically, socially, and environmentally responsible. We view performance metrics as an essential component of a modern utility regulatory framework, and we have commented extensively on the subject in prior rounds of utility distribution system plans,[5] and more recently in the response to the Commission's order in the New Technologies and Business Models proceeding.[6, 7]

Some metrics may simply track performance – sometimes referred to as scorecards or tracking metrics – while others will have associated financial incentives and/or penalties, known typically as performance incentive mechanisms ("PIMs"). Both types of metrics are valuable; even scorecard metrics can influence utility performance, whereas a limited number of PIMs can help shape utility performance in more meaningful ways. In particular, PIMs can be used to incent activities and desired outcomes that utilities would otherwise not pursue because such outcomes would undermine their traditional earnings opportunities from capital deployment under the cost-of-service business model. As discussed below, Michigan EIBC/AEE believe that DERs are particularly well suited to this type of regulatory tool.

As the DER market grows and competitive suppliers of DER products and services are able to provide at least some of the services normally provided by electric utilities, the potential increases that this will erode long-term utility capital investment opportunities, including traditional investments in generation, transmission and distribution infrastructure. This creates an environment in which utilities are likely to attempt to impede the growth of DER markets and in which utilities have little or no incentive to procure grid services from DERs, even if this may be in the best interests of ratepayers. It also creates the situation where utilities will likely pursue options to own DERs, because capital deployment is the primary source of long-term earnings for regulated utilities. However, because DER products and services are sold through competitive markets and are not part of the natural monopoly of the utility, this sets up significant tension that the Commission needs to address in order to fully realize the value proposition of DERs. As we have stated before, Michigan EIBC/AEE do not believe that DER ownership is an appropriate role for regulated monopoly utilities (with limited exceptions).[8]

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[5] *See* "AEE/Michigan EIBC Comments on DTE Draft Distribution Grid Plan." August 30, 2021. Available at https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t000000SyUBEAA3; "AEE/Michigan EIBC Comments on Consumers Energy Electric Distribution Infrastructure Investment Plan Draft." June 1, 2021. Available at https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t000000OpO56AAF.

[6] Michigan EIBC and AEE. "Comments on Draft Report." October 4, 2022. Available at https://www.michigan.gov/mpsc/-/media/Project/Websites/mpsc/workgroups/emerging-tech/New_Tech__Business_Models_Draft_Report_AEE_and_EIBC_Comments_VF.pdf.

[7] Michigan EIBC and AEE. Case No. U-20898. September 27, 2022. Available at https://mi-psc.force.com/sfc/servlet.shepherd/version/download/0688y000004JfK1AAK.

[8] *Ibid*.

Performance metrics, and PIMs in particular, can help resolve this tension by creating new earnings opportunities for utilities associated with DER markets that do not require utility ownership of DERs, and in the process also help direct utility investments toward solutions that prepare the grid for a more distributed energy future. Furthermore, given increasing electrification to support decarbonization of transportation and buildings, the Commission needs to ensure that utilities are cost-efficient with their system buildout and that customers are not burdened financially by the continuation of utility operations according to the status quo. Distribution system planning is therefore going to increase even further in importance in the years to come. Including a thoughtful performance metrics plan as part of these plans has the potential to yield significant benefits for customers, and, in our view, position the utilities for long-term financial and operational success.

Additional PIM design considerations

PIMs can be considered enhancements to the cost-of-service regulatory model, or they can also form part of a more comprehensive performance-based ratemaking ("PBR") regulatory model that would include other elements such as multi-year rate plans, revenue caps, and shared-savings mechanisms. Fortunately, Michigan does have experience with DER-related incentives through its Energy Waste Reduction ("EWR") programs - experience it can draw from as it explores this topic further in this proceeding and in the forthcoming MI Power Grid working group on utility financial incentives and disincentives.

PIMs can have both rewards and penalties associated with them or be positive (reward) only or negative (penalty) only. If a PIM has both rewards and penalties, these need not be symmetrical. Importantly, any penalties that are assessed should not be eligible for cost recovery.

PIMs should be designed in such a way as to produce a net benefit to customers. In determining whether benefits exceed costs from the customer perspective, any additional revenue a utility is to receive upon achieving a performance goal must be included among the costs to customers in the benefit-cost analysis. Only by including the incentives a utility receives among the costs to customers in the analysis can it be assured that customers will come out better under a PIM.

To create the right incentives, the financial reward or penalty associated with a PIM should be tied as closely as possible to the outcome desired, and should not simply reward direct actions taken by the utility. For example, a PIM addressing energy efficiency would focus on one or more desired outcomes of utility energy efficiency programs, such as actual energy saved relative to a baseline, as opposed to customer participation rates in the programs. One strategy to achieve the desired outcome(s) would certainly be to increase customer participation rates, but this alone does not guarantee the desired outcome will be met. Tying PIMs to outcomes rather than activities also gives utilities greater flexibility to seek out the best solutions, or portfolio of solutions, that help to achieve the goal. Utilities know their systems best, and giving them this flexibility will drive

greater innovation and produce more cost-effective outcomes. A metric tracking customer participation would be better suited as a scorecard metric.

Additionally, a key design feature of effective PIMs is that they should result in payouts only if performance exceeds an established baseline. For example, a PIM to reward peak load reduction might only begin to pay out beyond a certain percent reduction in peak load relative to the prior year. Furthermore, a reward in such an example could also be scalable, meaning a utility would only receive the full range of the reward as it achieved certain preestablished incremental goals above the baseline. Similarly, if there is an existing requirement for processing interconnection requests within a certain amount of time, utilities should not receive a financial reward simply for meeting such already existing requirements. Payouts can also be capped once a certain level of performance has been achieved to limit excessive spending by the utility. Similarly, penalties can be capped if performance falls below a defined limit.

Lastly, as suggested above, ongoing capital investments will be needed to meet performance targets. However, capital investment itself should not be the subject of the PIM, as the utility already has the return on equity associated with the investment as a financial incentive. Also, simply making a capital investment is no guarantee that the desired result will be achieved or that the investment is necessary to achieve the desired result. Advanced metering infrastructure ("AMI") offers a useful example. AMI can enable a variety of net beneficial products and services from DERs. Whether these are achieved depends heavily on how AMI is used by the utility, as well as other related activities, such as how easy it is for customers and their designated third-party providers to access AMI data in a timely and useful manner. A well-designed PIM (or PIMs) focused on key desired outcomes related to DERs or demand management may lead a utility to propose and properly utilize AMI. Provided the utility makes a compelling business case, the Commission could approve such an investment. The PIMs would only result in financial rewards if the targeted performance was achieved, not if the AMI is merely deployed.

DER-specific PIMs

With all of this in mind, there are opportunities for performance-based metrics to support better DER deployment and utilization. In its Order, the Commission gave two examples of possible metrics: (i) interconnection queue timing and (ii) DER integration at the circuit level based on number of systems and/or kilowatts. Michigan EIBC/AEE believe that both would be critical to track. The two examples given suggest that the Commission is not just interested in having utilities improve the DER interconnection process, but that utilities should also actively look to grow the DER market.

A metric designed to measure the efficacy of the DER interconnection process could also be valuable as a PIM and not simply a metric to track. Conversely, tracking the amount of DER deployed might be better as a scorecard metric. Although the amount of DER deployed is a useful

indicator, how those DERs are ultimately used for system and customer benefit is an outcome that could be tied to a PIM. To the extent that DERs provide services that would normally be met by utility-owned infrastructure, PIMs can be used to incentivize utilities to make extra efforts, develop innovative programs, and pursue solutions that use these DERs to provide net benefits to customers. The PIMS would reward actions that a utility would otherwise lack financial motivation to pursue.

DER Interconnection Metrics

As noted above, DER interconnection timeliness is a metric well suited to PIMs. The positive (reward) PIM is only awarded for exceeding regulatory timelines, not simply for meeting those timelines. The Commission can also consider broader measures of DER interconnection efficacy and customer satisfaction with the interconnection process, in addition to just timeliness of completing interconnection requests.

We recommend that the Commission examine the performance-based framework established in Hawaii, as they have various PIMs targeting DERs. In Hawaii, the recent Decision & Orders 37787 and 37802 approved comprehensive PIMs and metrics.[9] With regard to interconnection, the Hawaii PUC established the Interconnection Approval PIM, which is designed to promote DER interconnection by incentivizing faster connection times for DERs under 100 kW while penalizing underperformance. This ensures efficient integration of DERs into the grid. The metric used for this PIM is the mean number of "business days it takes the Companies to complete all steps within the Companies' control to interconnect DER systems…." To this end, three tiers of performance are rewarded for reaching targets, while three tiers are used to assess penalties.[10]

DER Utilization Metrics

As noted above, DER utilization metrics, beyond tracking the amount of DERs deployed, should also be considered by the Commission. Note that where rewards and penalties are included, the emphasis of these PIMs is on the desired outcome and how DERs are being used, and not simply the level of deployment.

In Hawaii, they have established metrics for the utilization of AMI and the use of DERs for grid services. Utilities will report quarterly on the number and percent of customers participating in DER or demand response programs.[11] The Grid Investment Efficiency PIM incentivizes the expeditious acquisition of grid service capabilities from DERs. This PIM is designed to offset retiring fossil fuel facilities and replace them with aggressive DER acquisition and use. There are

[9] Decision & Order 37802. Hawaii Public Utilities Commission. Docket 2018-0088. May 27, 2021. Available at https://dms.puc.hawaii.gov/dms/DocumentViewer?pid=A1001001A21E27B52242H02093.
[10] Decision & Order 37507. Hawaii Public Utilities Commission. Docket 2018-0088. December 23, 2020. Available at https://puc.hawaii.gov/wp-content/uploads/2020/12/2018-0088.PBR_.Phase-2-DO.Final_.mk_.12-22-2020.E-FILED.pdf.
[11] *Ibid.*

no penalties in this PIM, only rewards for desired behaviors. Initially focused on acquisitions of DERs, this PIM will eventually evolve into one that "incents utilization of DERs for grid services, upon determination of appropriate metrics and identification of required data to measure how DERs are being utilized to meet system needs."[12] The metric being used is the kW capacity of the grid services acquired in a given period. These grid services are those that include "(1) measures and programs approved in the DER docket; and (2) innovative measures or new concepts proposed by the Companies."[13]

There may also be the opportunity to measure both interconnection performance and DER utilization in a combined metric. In April of this year, in the Illinois Commerce Commission's Docket 22-0067, William D. Kenworthy filed direct testimony on behalf of the Environmental Law and Policy Center and Vote Solar in support of a DER Utilization for Value ("DUV") metric that "combines indices of two outcome-based measures of utility performance related to the deployment and operation of DERs: timeliness of interconnection application processing, and maximizing the benefits of grid modernization and clean energy for ratepayers."[14] Michigan EIBC/AEE support the principles contained in this metric, in particular those related to improving interconnection performance and better capturing the benefits of DERs. With regard to interconnection, Michigan EIBC/AEE support the aspects of the DUV metric that measure "the utility's performance in processing interconnection applications" and require "continuous improvement relative to the previous year's performance to achieve incentives."[15] Importantly, the DUV metric provides for incentives for "accelerating application processing milestones for interconnection Levels 1 – 4" and "penalties for missing the deadlines."[16]

With regard to valuing DER utilization, the DUV metric allows "the utility to earn a portion of net savings realized through the deployment and operation of DERs. The DUV metric incentivizes the utility to facilitate DER deployment by: (1) identifying grid needs that can be beneficially and cost-effectively served by DERs, and (2) implementing DER programs and other market participation pathways to unlock additional value from DERs serving those grid needs."[17] Michigan EIBC/AEE strongly believe there is a timely opportunity for Michigan's utilities to start learning the value provided by DERs, with the potential to give incentives for such value down the road.

Utility-caused Outages

An additional metric for incorporating DERs and DER integration into future distribution plans is the incidence of utility-caused outages experienced by customer-sited DERs. When the

[12] *Ibid.*
[13] *Ibid.*
[14] Illinois Commerce Commission. Docket 22-0067. Direct Testimony of William D. Kenworthy on behalf of Environmental Law and Policy Center and Vote Solar filed April 6, 2022. ELPC-VS Exhibit 2.01R. p. 1.
[15] *Ibid.*
[16] *Ibid.*
[17] *Ibid.*

conditions on the distribution grid force a customer's distributed generation ("DG") system to go offline, this can have significant repercussions for a customer's bill. For example, when DG such as a combined heat and power system goes offline, standby charges may be triggered. Further, the on-site system's forced outage rate ("FOR") – which is part of the calculation of standby charges – goes up each time the utility forces the system to experience an outage. These charges are in addition to the disruption caused when the customer loses the ability to rely on their on-site generation through no fault of their own.

In the most recent DTE rate case (Docket No. U-20836), Bloom Energy Company made the argument that these kinds of outages should be tracked and studied by the utility. In his direct testimony in Case No. U-20836, Bloom Energy Corporation witness Peter Morse explained:

> "For Bloom Energy systems configured to operate solely in parallel with the utility system, poor utility grid conditions can cause forced outages to occur on the Bloom Energy system through no fault of the Bloom system or customer. In order to protect against power flow back to the grid when the grid is malfunctioning, Bloom Energy systems that are not configured to allow grid-independent operation may have to shut down when 'tripped' by poor grid conditions. If poor grid conditions persist, the shutdown may cause the Bloom Energy System to lose internal heat needed for operation, and result in a longer re-start time for the Bloom Energy system once grid conditions have returned to normal."[18]

As to whether or not DTE tracks these kinds of outages, Bloom Energy Company witness Douglas Jester testified: "In DTE Electric Company's Response to Bloom Energy's Second Discovery Request dated March 30, 2022 (attached as Exhibit BE-7 (DBJ-2)), Company respondent A. Willis stated in response BEDE-2.4: 'The Company does not track 'DTE-caused forced outages' for Rider 3 customers.'"[19]

Overall, mitigating these kinds of utility-caused outages is critical to the optimal integration of DERs onto the distribution grid. Therefore, the incidence of utility-caused outages experienced by customer-sited DERs is an appropriate metric for incorporation into future distribution plans.

System-wide Metrics

Other areas where PIMs could be beneficial include outcomes tied to broad system benefits that are driven substantially by DERs such as peak load reduction, emissions reductions, and improved reliability. Peak load growth, in particular, is a primary driver of utility costs, whether to procure or produce power on peak or to upgrade transmission and distribution facilities. Especially as transportation electrification and building electrification are expected to drive up electricity demand, having utilities focus on peak load reductions is likely to yield significant net benefits for

[18] Case No. 20826. Direct testimony of Bloom witness Peter Morse. May 19, 2022. p. 9.
[19] Case No. 20826. Direct testimony of Bloom witness Douglas Jester. May 19, 2022. p. 8.

customers in the coming years. DERs, whether DG, storage, energy efficiency, demand response, or electric vehicles ("EVs"), can all contribute to managing and reducing peak demand. Developing a PIM broadly targeting peak load reduction will incent the utility to seek out the most cost-effective solutions from the range of options available. There may also be complementary grid-side investments and solutions the utility could pursue such as volt-var optimization that would leverage investments in AMI and other smart grid technologies - technologies that also support greater DER integration and utilization. The Commission could also consider more targeted metrics and PIMs related to energy efficiency and beneficial electrification.

To determine where to focus these efforts, we recommend that the Commission convene stakeholders in a structured process to articulate broad goals/outcomes and develop PIMs to achieve them. While the forthcoming MI Power Grid workgroup on utility incentives and disincentives could be considered for that, we also point to Nevada and Hawaii as offering good examples of such processes. In Hawaii, in response to legislation to establish a PBR regulatory framework, the Hawaii Public Utilities Commission undertook a comprehensive, externally facilitated process to develop the framework, which is now being implemented. The Public Utility Commission of Nevada ("PUCN") had the Rocky Mountain Institute and Regulatory Assistance Project facilitate informal workshops that allowed stakeholders to work collaboratively to inform the development of alternative ratemaking options. The findings of these informal workshops were then gathered and presented to the PUCN as a concept paper that primarily discussed "… the development of goals and outcomes by utility stakeholders."[20] This is, in our view, preferable to using the more adversarial contested case process to initially design and structure PIMs.

Conclusion

Michigan EIBC/AEE appreciate the opportunity to provide this input to the Commission on this important topic. We look forward to continuing to contribute to this discussion and investigation so that the next iteration of the utility distribution system plans are more valuable and support the Commission's broader efforts to align utility incentives with customer benefits and state policy goals.

[20] Concept Paper 1. Docket No. 19-06008. April 28, 2022. Available at https://pucweb1.state.nv.us/PDF/AxImages/DOCKETS_2015_THRU_PRESENT/2019-6/44941.pdf.