Before the Minnesota Public Utilities Commission

In the Matter of a Commission Investigation to Identify and Develop Performance Metrics and, Potentially, Incentives for Xcel Energy's Electric Utility Operations

PUC Docket Number: E-002/CI-17-401

Comments of Advanced Energy Management Alliance

I. Background

Advanced Energy Management Alliance ("AEMA")[1] is a trade association under Section 501(c)(6) of the Federal tax code whose members include national distributed energy resource ("DER"), demand response ("DR"), and advanced energy management service and technology providers, as well as some of the nation's largest consumer resources, who support advanced energy management solutions due to the electricity cost savings those solutions provide to their businesses. This filing represents the opinions of AEMA as an organization rather than those of any individual association members.

II. Introduction

AEMA thanks the Minnesota Public Service Commission ("Commission") for this opportunity to comment on performance metrics and incentives for Xcel Energy's ("Xcel") electric utility operations. Our comments briefly highlight the benefits of DR[2] in Minnesota,

[1] *See* Advanced Energy Management Alliance website: http://aem-alliance.org

[2] It is worth noting that different means can be used to facilitate demand response such as load curtailment (e.g., shutting off lights), environmentally permitted back-up generation (e.g., a natural gas generator with emissions controls), or energy storage.

identifying principles for establishing performance metrics, discussing the Integrated Resource Planning ("IRP") process, and providing examples of policies from other states.

III. Demand Response Benefits

DR has the potential to create public benefits through five major value streams in Minnesota:

1.) **Lower customer bills**: It costs less to incent customers to reduce their consumption for a limited number of hours per year than it does to retain existing peaking generation, or to construct new generation. DR also can reduce transmission and distribution spending.

2.) **Economic development**: Instead of buying energy from out-of-state fuel producers, DR results in energy dollars flowing to the businesses, school districts, and institutions that participate in DR, and is reinvested in the local economy.

3.) **Increased reliability and resiliency**: Recent storms have demonstrated the need for a resilient electric grid and not relying exclusively on central station generation and long transmission lines. DR stabilized the Florida electric grid after Hurricane Irma, and could be deployed in Minnesota in the case of a major weather event.

4.) **Environmental benefits:** A Navigant Consulting report found that DR could reduce carbon emissions by as much as one percent directly and another one percent indirectly through facilitating the integration of renewable energy.[3]

5.) **Low risk and noncontroversial**: DR avoids the need to build new infrastructure, which prevents controversial siting proceedings. Moreover, unlike a 30-year investment, as is the case with new infrastructure, DR can be scaled up or down quickly. This benefits

[3] NAVIGANT CONSULTING INC., CARBON DIOXIDE REDUCTIONS FROM DEMAND RESPONSE: IMPACTS IN THREE MARKETS, prepared for AEMA, (November 25, 2014). http://aem-alliance.org/download/10680/

ratepayers (and regulators by extension), so that they are not responsible for paying for infrastructure for 30 years if the perceived need that creates the infrastructure build (e.g., load growth) does not materialize.

IV. Principles for Establishing Performance Metrics

AEMA applauds Minnesota utilities for their widespread deployment of DR through interruptible rate tariffs and the Commission for their historic support for DR. DR has proven itself in Minnesota as a cost-effective alternative to traditional generation. However, as is the case with any successful organization, if Minnesota utilities and regulators wish to maintain Minnesota's position as leaders in demand-side management, both the regulatory paradigm and the nature of DR programs will need to evolve.

Below we provide several examples of states with positive performance-based regulatory mechanisms in place for DR. At a high level, we recommend the Commission apply the following three principles when designing performance incentives:

1.) **Align utility interests with customer interests**: Traditional regulation incents utilities to invest in capital infrastructure and earn a return on that investment. Programs such as DR and energy efficiency are treated as operating expenses and utilities typically cannot earn a return. Therefore, modifications and performance-based mechanisms such as shared savings are needed to ensure that if a DR program results in higher net benefits and lower costs to customers than a capital infrastructure investment then the utility's bottom line is better off with the DR program.

2.) **Apply performance incentives holistically and avoid "lowest cost" comparisons:** Too often the refrain used is "we are long on capacity" so we are not going to invest in demand-side management programs. However, in states that are long on capacity, utilities should be incented to retire existing generation if DR could deliver higher net benefits than the existing generation. For instance, if a coal plant costs $45/kW per year to operate and a DR program costs $46/kW per year to operate but can also avoid $10/kW per year in transmission and distribution infrastructure, the utility should be incented to implement the DR program. As this brief example highlights, it is critical to structure performance incentives around maximizing net benefits as opposed to lowest cost. Performance incentives should also force utilities to plan holistically, and to consider DR (or DER) before making significant capital investments, whether it is building new generation or a new distribution substation. For instance, a DR resource used for a Non-Wires Solution ("NWS") may also be used to reduce wholesale capacity and energy prices. Decisions should not be made in silos.

3.) **Encourage utilities to leverage third party capital**: Utilities should be incented to partner with third parties that have invested hundreds of millions of dollars of private capital in technology and market interface capabilities, as opposed to developing solutions in house with ratepayer money. As the need for faster responding resources becomes more prevalent, more advanced technology and constant customer engagement will be required. Partnerships with third parties can strengthen utility planning and operational processes while being efficient with ratepayer dollars. Utilities should also be agnostic as to whether they own resources or whether third parties own the resources. In fact, states such as New York are moving to more of a platform model where utilities still maintain control of the system and receive cost-of-service, but can earn revenues from facilitating actions by third parties that help meet state policy goals and reduce energy bills. Although New York is a deregulated state, a similar model could apply in Minnesota.

V. The IRP Process

Under traditional cost of service ratemaking methods, utilities are not rewarded to create programs that go beyond traditional interruptible programs in order to capture the public benefits listed above. Shifting to performance-based compensation for DR initiatives would encourage innovation by utilities.

Establishing performance-based incentives for DR can begin in the IRP, but also be applied throughout the decision-making process including transmission and distribution investments. The IRP should address what functions DR is expected to perform and how DR will be modeled. The IRP should set clear performance goals and metrics that stakeholders and customers can understand. Xcel's compensation for performance would be contingent on how it plans to use DR as developed in its IRP. Performance metrics must be transparent in order to provide performance incentives that are in the public interest. Customers and other stakeholders must be able to see that Xcel has met its performance goals. In turn, Xcel would receive compensation in proportion to the value created by its DR programs.

VI. Performance-Based Regulation in Other States

Several states have performance-based regulation in one form or another, and below we have captured three relevant examples:

1.) **New York**

New York's Reforming the Energy Vision ("NY REV") initiative is designed to help customers make more informed energy choices, develop new energy products and services, and promote clean energy throughout the state. While New York is a deregulated state, NY REV has several relevant takeaways for this proceeding in Minnesota, including:

- NY REV uses outcome-based incentives to encourage innovation by utilities where the utility chooses the most effective products and services through a transparent process. For instance, REV has Earnings Adjustment Mechanisms ("EAMs") that enables utilities to earn a bonus to their ROE for meeting certain goals that align with state policy goals. One of the EAMs is to improve system efficiency or reduce peak demand. The New York Public Service Commission found that "If, for example, the 100 hours of greatest peak demand were flattened, long term avoided capacity and energy savings would range between $1.2 billion and $1.7 billion per year."[4]
- NY REV incents utilities to invest in NWS by allowing utilities to earn on successful NWS deployments. For example, with regard to the Brooklyn Queens Demand Management ("BQDM") program, in which Con Edison was allowed to spend $200 million on NWS to defer the need for an approximately $1 billion substation upgrade, the New York Public Service Commission ordered:

  > "The Commission finds that providing a regulated return on investment to the Company, along with the 10-year amortization period is a reasonable earnings opportunity that should make the Company indifferent to selecting the alternative solutions over traditional capital expenditures. In addition, a 100 basis point ROE adder on BQDM Program costs, tied to

[4] *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision*, NY PSC Case no. 14-M-0101, ORDER ADOPTING REGULATORY POLICY FRAMEWORK AND IMPLEMENTATION PLAN at 20 (February 26, 2015).

outcomes that the Company is expected to achieve to further Commission policy objectives, is provided as an additional benefit. These outcomes are DER market animation and lower costs to customers."[5]

- NY REV creates a comprehensive framework for utility decision making so that investment decisions compare the net benefits of deploying DER versus traditional infrastructure. Each utility has a transparent a Benefit Cost Analysis Handbook for evaluating whether a NWS would result in higher net benefits to customers than traditional capital infrastructure. This ensures that if a NWS, such as DR or energy storage, could also reduce wholesale prices, the comparison analysis accounts for that benefit.
- Further, utilities are encouraged to motivate third party activity where that provides efficient system outcomes. Utilities are not allowed to own DERs except under a very limited set of conditions, including under pilot projects or where third-party solutions do not exist or are too costly. As mentioned earlier, utilities are also able to earn Platform Service Revenues for providing value added services and facilitating transactions between third parties and customers.

2.) **Missouri**

The Missouri Legislature passed the Missouri Energy Efficiency Investment Act ("MEEIA") in 2009 to ensure demand-side programs have parity with traditional supply-side resources by allowing utilities to earn a profit for energy savings and peak reduction through voluntary demand-side management.[6] The MEEIA directed the Commission to set voluntary

[5] *Petition of Consolidated Edison Company of New York, Inc. for Approval of Brooklyn Queens Demand Management Program,* NY PSC Case No. 14-E-0302, ORDER ESTABLISHING BROOKLYN/QUEENS DEMAND MANAGEMENT PROGRAM at 21-22 (December 12, 2014).
[6] *See* Mo. Stat. § 393.1075; *see* Mo. Code Regs. 4 C.S.R. 240-20.092-.94.

energy and demand reduction targets through which utilities can earn incentives and recover lost revenues for meeting or exceeding their goals.

In order to capture any earnings opportunity, utilities must evaluate the performance of their demand-side programs against commission-approved performance metrics for each program.[7] MEEIA requires the commission to consider the total resource cost test ("TRC") as a preferred cost-effectiveness test.[8] The TRC is defined as "a test that compares the sum of avoided utility costs and avoided probable environmental compliance costs to the sum of all incremental costs of end-use measures that are implemented due to the program, as defined by the commission in rules."[9] Programs targeted to low income customers or general education campaigns do not have to meet a cost-effectiveness test.[10] Utilities are also required to submit an annual report to the commission describing the demand-side programs implemented in the previous year, how much energy and demand savings each one achieved, and the cost-effectiveness of each program.[11]

Although MEEIA is not a comprehensive performance-based regulatory system, it demonstrates how performance-based incentives can help achieve specific public policy goals in a vertically integrated state. Rather than requiring a specific target for energy efficiency and DR, utilities are incentivized to implement programs that maximize value for their customers and shareholders. Voluntary peak demand reduction targets, combined with utility earnings opportunities, are an effective way of harmonizing ratepayer and utility interests. Similar components can be applied in Minnesota as well as part of broader performance-based reforms.

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[7] Mo. Stat. § 393.1075.3(2)(I).
[8] Mo. Stat. § 393.1075.4.
[9] Mo. Stat. § 393.1075.2(6).
[10] Mo. Stat. § 393.1075.4.
[11] Mo. Stat. § 393.1075.12.

3.) **Indiana**

Although not directly related to performance-based regulation, the Indiana Michigan Power ("I&M") tariff in Indiana is an example of structuring successful DR programs that achieve DR goals in a traditionally regulated state. The I&M tariff provides DR capacity to the utility at a significant discount to the net cost of new entry (referred to as "Net CONE" in its tariff) for new generation. While I&M maintains control over the program and can use it for planning and operations, the tariff allows approved third parties to recruit customers to participate and deliver demand response. This is an example of a MISO state approving frameworks that encourage DR through utility and third party collaboration. A similar framework could be applied in Minnesota.

VII. Conclusion

Performance-based regulation provides an opportunity to advance policy goals consistent with the public interest and create rewards for both the utility and its customers. These comments reflect general principles to consider when developing performance metrics and incentives for DR initiatives to achieve the policy goals of lowering customer bills, creating local economic development, strengthening the reliability and resiliency of the electric grid, and benefiting the environment. AEMA welcomes the opportunity to participate in a technical conference if the Commission concludes it would be helpful. AEMA thanks the Commission for its interest in this topic and for consideration of our comments.

Respectfully Submitted,

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