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January 27, 2023

Public Service Commission of Wisconsin
4822 Madison Yards Way
Madison, WI 53705

RE: Midwest Energy Efficiency Alliance (MEEA) Response to the Public Service Commission of Wisconsin (PSC) Grant Program for Preventing Outages and Enhancing the Resilience of the Electric Grid, Docket 9713-FG-2022

The Midwest Energy Efficiency Alliance (MEEA) welcomes the opportunity to provide comments on the establishment of the scope and administration of the Public Service Commission's Grant Program for Preventing Outages and Enhancing the Resilience of the Electric Grid, funded by Section 40101(d) of the Infrastructure Investment and Jobs Act (IIJA). MEEA is a member-based non-profit organization that serves as a collaborative network, promoting energy efficiency to optimize energy generation, reduce consumption, create jobs and decrease carbon emissions. MEEA seeks an achievable pathway for all people and communities in the Midwest to receive the economic, environmental and societal benefits of energy efficiency and the larger clean energy economy.

At MEEA, we leverage our expertise to be the Midwest's leading resource for our members, allies, policymakers and the broader energy sector to promote energy efficiency as the essential pathway to achieve a clean, affordable, equitable and sustainable future. We see energy efficiency as the least cost foundation of the clean energy economy, creating immediate energy savings, providing career pathways, reducing emissions, improving new and existing buildings and boosting Midwest business and industries. By reducing customer bills and increasing job opportunities in the clean energy workforce, energy efficiency is also a powerful tool for economic recovery in the current economic crisis.

Energy Efficiency & Resilience

Most discussion about the resilience of our energy system focuses on supply and infrastructure. Both supply and infrastructure are indeed essential parts of a resilience strategy, but we want to remind you that demand considerations also play an important and meaningful role in grid resilience. Energy efficiency (EE) and demand response (DR) can complement other resilience investments. The Public Service Commission of Wisconsin should not overlook these low-cost, high-benefit resources.

Understanding the role of distributed energy resources (DERs), from both the supply- and demand-sides, will enhance your resilience program. The body of knowledge on the role of these resources in resilience is growing, and these comments will cite several resources that reflect the current understanding.

Wisconsin, per the U.S. Energy Information Administration, is a large consumer of energy, ranked 15th in the nation for per-capita energy use in the commercial sector and 17th in the residential

sector.¹ Wisconsin is also an energy importer, consuming six times as much energy as it produces.² Investments on the demand side can help to alleviate some of the resilience risks that the state faces from high energy needs, especially when so much of that energy is imported. It will be important that potential investments made under this program that implement DERs, whether supply- or demand-side, be compared on equal footing with other investment opportunities.

DERs have varying resource characteristics and potential resilience impacts. These impacts include:

- *Dispatchability. DERs can respond to a disruption at any time with little to no advanced warning.*
- *Islanding capability. DERs have the capability to isolate specific loads, a customer or customers from the rest of the distribution grid and continue to serve those customers during the outage.*
- *Siting at critical customer locations. DERs can be located at critical loads (e.g., police stations) or at critical points in the grid (e.g., residential apartment buildings).*
- *Fuel security. DERs do not rely upon the availability or deliverability of a limited physical fuel to operate.*
- *Quick ramping. DERs are capable of changing output quickly to respond to rapidly changing load.*
- *Grid services. DERs can provide voltage support, frequency response, and other grid services.*
- *Decentralization. DERs can be sized and sited to support distributed load.*
- *Flexibility. DERs can be deployed and operated quickly (relative to other supply-side resources) at locations and times where resources are needed.³*

Energy efficiency offers resilience benefits by: (a) reducing customer demand, allowing for smaller backup or emergency power sources; (b) facilitating easier power restoration because of lower demand; and (c) improving the safety and survivability of buildings, allowing customers to live safely during disruption events.⁴ Energy efficiency can also enhance the resilience impacts from other DERs by allowing storage to meet demand for a longer period or lowering the generation needed to support an islanded microgrid.

¹ U.S. Energy Information Administration. 2020. *Table C14. Total Energy Consumption Estimates per Capita by End-Use Sector, Ranked by State, 2020.* EIA.

https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_sum/html/rank_use_capita.html&sid=US

² U.S. Energy Information Administration. 2022. *Wisconsin Profile Overview.* EIA.

<https://www.eia.gov/state/?sid=WI#tabs-1>

³ NESP. 2022. *Methods, Tools and Resources: A Handbook for Quantifying Distributed Energy Resource Impacts for Benefit-Cost Analysis.* p. 177. National Energy Screening Project.

<https://www.nationalenergyscreeningproject.org/resources/quantifying-impacts/>

⁴ Relf, G and Jarrah, A. 2020. *Measuring Three Rs of Electric Energy Efficiency: Risk, Reliability, and Resilience.* ACEEE Topic Brief. American Council for an Energy-Efficient Economy.

<https://www.aceee.org/topic-brief/measuring-three-rs>

Measuring Resilience Impacts

There are, according to our current understanding, few or no jurisdictions that have quantified resilience impacts of EE or other DER resources for the purposes of benefit-cost analysis. Wisconsin, along with other states, is breaking new ground by considering what metrics are needed to assess resilience investments related to DERs. It is important to establish these metrics thoughtfully, so the costs and resilience benefits of EE and DERs can be adequately compared to the other investment options available to the Commission, Wisconsin utilities and the Focus on Energy Program to meet your goals.

The National Energy Screening Project (NESP) has proposed a seven-step framework for assessing resilience impacts of EE and other DERs:

1. Characterize the threats.
2. Define resilience metrics.
3. Define and quantify baseline resilience.
4. Characterize potential resilience impacts of DERs.
5. Quantify resilience impacts from proposed DERs.
6. Calculate net resilience impacts of proposed DERs.
7. Calculate dollar values of resilience impacts.⁵

Following such a framework and transparently documenting each step will ensure that DERs are given full consideration alongside the primary transmission and distribution investments considered under IJA Section 40101(d).

Like resilience, EE and DERs can also impact customer equity. The resilience benefits to target populations relative to other customers can be measured using a process known as Distributional Equity Analysis (DEA).⁶ Distributional equity can be defined as “energy policies and programs [that] achieve fair distribution of benefits and burdens across all segments of a community and across generations.”⁷ Establishing a consistent framework and metrics that consider the distributional equity of investment and resilience impacts would allow the PSC to screen and prioritize investments that maximize resilience benefits for underserved low-income and rural populations who have been disadvantaged by past energy policies. Importantly, the Commission has centered these issues in its discussions over the last year during the Focus on Energy Quadrennial Plan IV process and the performance-based regulation workshop series. We encourage the Commission to center equity in the policies and programs established through this IJA funding opportunity and recommend that the Commission align the goals of the Grid Resilience Grant Program with the goals and outcomes of other PSC processes.

We hope that the resources we cited prove valuable to you as you determine how to make investments in distributed energy resources under the Grid Resilience Grant Program, as well as

⁵ NESP. 2022. p. 178-179.

⁶ NESP. 2022. Chapter 9.

⁷ NESP. 2022. p. 183



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other federally funded energy programs. MEEA stands ready to support your office in your efforts. If you have questions on these comments or want additional information, please contact, Maddie Wazowicz, Policy Manager of Legislative and Regulatory Affairs, at mwazowicz@mwalliance.org. Thank you for your consideration.

Sincerely,

Stacey Paradis
Executive Director, MEEA

These comments reflect the views of the Midwest Energy Efficiency Alliance – a Regional Energy Efficiency Organization as designated by the U.S. Department of Energy – and not the organization's members or individual entities represented on our board of directors.