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May 22, 2024

Michigan House of Representatives
124 North Capitol Avenue
Lansing, MI 48933

Re: MEEA Comments on Data Centers and Energy Efficiency Measures

Dear Members of the Michigan House of Representatives,

Thank you for the opportunity to comment today. The Midwest Energy Efficiency Alliance (MEEA) is a member-based, nonprofit organization promoting energy efficiency to optimize energy generation, reduce consumption, create jobs and decrease carbon emissions in all Midwest communities. Our members include energy efficiency-related businesses, manufacturers, local governments, utilities, academic institutions, researchers and advocacy groups. MEEA engages in energy efficiency policy and programs in 13 Midwest states, including Michigan, where 79 of our 170+ members are headquartered or operating.

MEEA sees energy efficiency as the least-cost foundation of the clean energy economy, creating immediate energy savings, reducing utility costs and emissions, improving public health and grid resiliency, and lowering energy bills. ***It is critical that legislators consider energy efficiency when crafting policy to attract large energy users like data centers.*** MEEA understands that data centers are critical to our business processes and daily lives, where computing and artificial intelligence are involved in more and more of our economy's processes. However, it should be noted that these facilities use an incredible amount of energy to power their operations, and Michigan would be best suited if legislation required data centers to be constructed and operated in the most efficient manner possible.

Energy Efficiency and Demand

For several years, our nation has seen relatively flat demand for energy, despite increases in population and economic output. Energy efficiency has succeeded in tempering this demand by reducing unnecessary generation. Unfortunately, recent trends show that many utilities expect demand to skyrocket in the coming years, largely due to the rapid growth of data centers and other energy-intensive buildings. It is critical that policymakers consider the impacts of these facilities, as unfettered demand from new facilities will strain the grid, potentially leading to disastrous outcomes like poorer reliability or even blackouts.

Notably, Michigan passed legislation in 2023 to set the state on a path to carbon-free electricity generation by 2040. It will be challenging to meet the increased energy



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demand of data centers while also retiring fossil-fuel based resources. Utilities have articulated plans to build new carbon-free generation, but this often takes considerable time to deploy due to clogs in the regional transmission network. MEEA, as well as many other advocates, wants to see Michigan succeed in implementing its 2023 legislation and does believe the state can meet this goal if the state's leaders act in a responsible way to ensure that negative impacts from large energy users are mitigated. Energy efficiency must be a part of the solution. Per data from Lazard and Lawrence Berkeley National Laboratory, saving one megawatt-hour of energy through energy efficiency costs \$15 on average in the Midwest. It is considerably more expensive to produce energy, costing up to \$166 per megawatt-hour generated from coal or \$221 from gas peaking plants. MEEA believes that maximizing energy efficiency and demand response is critical to ensuring the grid can take on additional load while also balancing the challenges in adding new generation. It is important that lawmakers, energy regulators, economic development agencies and utilities work together to ensure the grid can take additional growth from these energy-intensive buildings.

Data Centers and Energy Usage

As the digital landscape continues to grow rapidly, addressing the immense energy requirements of data centers has emerged as a critical environmental and economic issue. A data center can use ten to fifty times as much energy as a typical commercial office building, per U.S. Department of Energy data. These vast computing facilities consume tremendous amounts of energy, largely due to their IT equipment and the extensive cooling systems necessary to prevent overheating caused by densely packed server racks and other hardware. When cooling infrastructure operates inefficiently and airflow is poorly managed, it results in substantial energy waste, increased operational costs and a larger carbon footprint.

Fortunately, there are proven methods available to significantly enhance energy efficiency within data centers. By adopting best practices, such as implementing hot aisle/cold aisle containment strategies, investing in high-efficiency HVAC systems, and upgrading to energy-efficient servers, storage solutions and networking hardware, data center operators can achieve substantial reductions in energy consumption and associated costs. These measures not only yield economic benefits but also contribute to environmental sustainability efforts by decreasing the overall energy demands of digital infrastructure.

It is imperative for legislation to include strong energy efficiency standards for data centers, given their considerable energy demand. By incorporating energy efficiency provisions into legislation, especially those related to HVAC systems and IT equipment, environmental impact can be reduced, and long-term sustainability ensured. MEEA encourages the state to mandate these energy efficiency considerations and data



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centers to coordinate with their local utilities' energy efficiency teams to ensure the facility maximizes its energy efficiency potential.

Green Building Certifications and Energy Codes

We commend legislators for encouraging data centers to explore a variety of green building certifications to lessen their energy use. While many of the certifications listed in the legislation would be beneficial for facilities to adopt, most address the facility's energy demand and load from the operation of equipment. However, MEEA would also encourage the adoption and implementation of standards that address the way a building is physically constructed. For example, the International Energy Conservation Code (IECC) (beginning with the 2018 version) and ASHRAE 90.4 standard (beginning with the 2016 version) both include provisions specifically addressing data centers and the circumstances that make them unique (e.g., the fact that they do not need as much insulation as other commercial buildings due to the amount of heat being radiated from the equipment).

The IECC and ASHRAE standards also properly address other building envelope measures, such as air and duct tightness, that are critical whenever a structure is consistently using a great deal of energy. As mentioned, a data center has a distinctive energy usage pattern and requires a considerable amount of cooling and ventilation. Ensuring that the building's envelope and ducts are tightly sealed will make it so that these systems do not need to work as hard, thereby reducing the amount of energy they use and mitigating some of the facility's demand for energy. Once the center is operational, MEEA then recommends the building operators work with their local utilities to explore additional pathways for efficiencies through assessments and rebates.

Conclusion

As the region's premier advocate for energy efficiency, MEEA recommends the state consider fortifying language related to energy efficiency requirements to ensure that new data centers prioritize energy efficiency, both in their construction and operation. While MEEA understands data centers' role in the world, the amount of energy they consume can be overwhelming to existing infrastructure. It is imperative that the structures operate in a way that reduces their energy consumption as much as possible.

The energy usage of these structures will negatively impact residents if their demand is left unchecked. Michiganders deserve thoughtful planning around these investments and policies, especially when it comes to data centers adversely impacting energy reliability and affordability. Energy efficiency and demand response are critical to mitigating these impacts and helping the state meet its climate goals that were set in statute in 2023. MEEA remains committed to being a resource for Michigan legislators and welcomes the opportunity to continue engagement on energy policy for the state



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moving forward. Thank you for the opportunity to comment. If you have any questions on these comments or would like to discuss energy efficiency policy further, please reach out to MEEA's Policy Director, Maddie Wazowicz, at mwazowicz@mwalliance.org.

Sincerely,

Paige Knutsen, Executive Director

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.