

Advanced Energy Management Alliance

Comments on

Energy Master Plan for the State of New Jersey

October 12, 2018

Thank you to the Governor's office and Board of Public Utilities for allowing significant stakeholder input to the Energy Master Plan ("EMP"). Advanced Energy Management Alliance ("AEMA") members have met with staff, and attended and presented at nearly all of the stakeholder meetings. We presented and submitted testimony in the Sustainable and Resilient Infrastructure meeting and have added to those comments herein.

## **Introduction.**

AEMA is a trade association under Section 501(c)(6) of the Federal tax code whose members include national distributed energy resource companies and advanced energy management service and technology providers, including demand response ("DR") providers, as well as some of the nation's largest demand response and distributed energy resources ("DER" or "DERs"). AEMA members support the incorporation of distributed energy resources, including advanced energy management solutions, to achieve electricity cost savings for consumers, contribute to reliability and resilience, and provide sustainable solutions for a modern electric grid. These comments represent the collective consensus of AEMA as an organization, although they do not necessarily represent the individual positions of the full diversity of AEMA member companies.

AEMA appreciates the opportunity to provide comments to the Committee and recognizes that leadership from the Governor, Senate, Assembly, Board of Public Utilities, and other state agencies has significantly driven the growth of distributed energy resources, in particular solar energy and demand response. AEMA believes that—with the appropriate public policies—DER, including solar, energy storage, demand response, advanced energy management, and other distributed resources and services, can, and should, play a significant role in the Energy Master Plan for New Jersey.

There are already several forms of demand response in operation across Northeast states. These include "peak shaving" state programs, which reduce peak load on the system so customers buy less electricity and put less stress on the distribution system at peak times. Pennsylvania's Act 129 is one example of such a program. The second type of demand response implemented at a state level is "Non-Wires Solutions", which resolve geo-specific overloads, such as the Brooklyn Queens Demand Management ("BQDM") program. Finally, grid operators,

such as PJM, implement emergency/pre-emergency demand response programs based on preventing and managing emergency operations.

### **General Comments.**

AEMA is convinced that the full and intentional inclusion of DERs in New Jersey's EMP and complementary public policy will enable achievement of 100% clean energy by 2050, while growing the clean energy economy and jobs with resilient, affordable resources that use advanced technologies that are available today to reduce carbon and benefit all citizens of New Jersey.

A key element in determining the appropriate technologies and applications to deploy in order to increase resilience is to define the term. AEMA has filed<sup>1</sup> numerous sets of comments with the Federal Energy Regulatory Commission ("FERC") addressing this very topic. One way to view resilience is to define it in terms of probability of a defined contingency and the speed of recovery from that contingency. Contingencies may vary across regions and states. The time line for recovery may also vary relative to the cost and benefits associated with recovery identified in that region. Moreover, the kinds of resources and attributes available and therefore necessary to maintain a resilient system in certain physical circumstances will also vary from system to system, geography to geography. Given New Jersey's experience during Superstorm Sandy and during other extreme weather events, the state appears to have a well-developed sense of what constitutes those contingencies. AEMA is confident that DERs can and should be made available to manage that risk and increase resilience.

AEMA is equally certain that DERs constitute sustainable resources: demand response and advanced energy management (that can be enhanced with energy storage) reduce load on the grid; rooftop solar and microgrids (that use a variety of technologies, including combined heat and power) provide zero emission generation. The combination of these technologies and applications allow consumer-sited assets to provide flexible resource to the grid, equal, if not superior to in many ways, supply side generation. These technologies are available now to consumers who can exercise a choice in how they want to obtain and use their energy.

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<sup>1</sup> See AEMA Comments on Department of Energy Notice of Proposed Rulemaking: <http://aem-alliance.org/aema-files-reply-comments-doe-nopr/>

## **Distributed Energy Resources in New Jersey.**

AEMA members aggregate 1,500 locations in New Jersey currently in PJM's emergency/pre-emergency demand response programs. As a result, electric customers in New Jersey receive roughly \$50 million dollars per year for participation and support of the grid.<sup>2</sup> Our members find that customers are eager to participate in new programs that will help them serve the grid, while also generating revenue for their own operations. Many of AEMA's members are already doing business in New Jersey and many more are poised to begin such efforts based on the policy positions and programs currently under consideration by this Administration. Based on our experience, AEMA believes strongly that DERs should be included in the EMP as one tool to increasing resilience and sustainability. Allowing access to DERs for consumers and opening up the market in New Jersey for consumer choice will create jobs in the state and allow all consumers to benefit from these choices while reducing the overall cost to serve every customer in the state.

An example of AEMA members creating jobs in New Jersey is Centrica, part of Direct Energy. Direct has long had a significant presence in New Jersey, in part as a result of acquiring the Hess Energy Marketing business. Recently, to meet the energy resilience and energy performance needs of businesses and organizations around the world, Centrica created Distributed Energy & Power, which is now branded as Centrica Business Solutions. Centrica Business Solutions is headquartered in Iselin, with over 100 full-time employees, and, in 2017, finished construction of an innovative CHP and backup generation production facility in East Rutherford.

Several other members of AEMA are doing business in New Jersey, including Enel X (formerly EnerNOC), which has increased its overall demand response capacity to 3.8 GW and is currently the largest DR aggregator in the Pennsylvania, New Jersey and Maryland markets. DR aggregation saves participants on their energy bill, while reducing the cost of electricity for all consumers on the system.

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<sup>2</sup> McAnany, James, *2018 Demand Response Operations, Market Activity Report: Sept 2018*, PJM Interconnection, Inc., September 10, 2018. Available at: <https://www.pjm.com/-/media/markets-ops/dsr/2018-demand-response-activity-report.ashx?la=en>

## **Distributed Energy Resources for Resilience.**

AEMA provides the following four examples to demonstrate that DER and DR should be included in any resilience portion of the EMP:

- 1) PJM Interconnection credited DR with helping the grid withstand the Polar Vortex, stating: “Although demand response is usually only needed by grid operators in the summer, operators also successfully deployed it during the power emergencies occasioned by the bitter cold ‘Polar Vortex’ weather in January 2014. As PJM set multiple winter peak records early that month, it called on demand response, and received more megawatts as load reductions than it could obtain as generation from all but the very largest generating stations. . . . In the midst of those challenging conditions, demand response—responding to PJM’s dispatch as a wholesale market resource—helped maintain the reliability of the system.”<sup>3</sup>
- 2) After Hurricane Irma, DR helped maintain balance between supply and demand to stabilize the Florida electric grid. As thousands of customers were rapidly having their power restored, demand threatened to outpace supply due to generation outages from the storm. Without DR, this imbalance could have created another blackout for consumers who had already been without power for an extensive period due to the Hurricane. Fortunately, Tampa Electric Company (“TECO”) had the foresight to contract for a diverse set of resources, and dispatched DR. In this case, DR provided grid resilience, allowing the grid to bounce back from a major disturbance.
- 3) Hurricane Harvey unleashed 33 trillion gallons of rainwater along the Gulf of Mexico and caused a range of energy impacts, including coal-to-gas switching as coal piles were too wet for conveyer systems to handle. However, the Texas Medical Center - the largest medical center in the world – was able to sustain its air conditioning, refrigeration, heating, sterilization, laundry, and hot water needs throughout the storm thanks to a combined heat and power (“CHP”) installation operated by Thermal Energy Corporation. The 48-megawatt CHP system operated without interruption during the storm.

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<sup>3</sup> Petition For Rehearing En Banc Of PJM Interconnection, L.L.C., Electric Power Supply Ass’n v. FERC at 10-11, No. 11-1486 (D.C. Cir. July 7, 2014).

- 4) System operators recognize that DERs can enhance system resilience. For example, the New York Independent System Operator, in their 2017 DER Roadmap, states: “DER can help grid operators by improving system resilience, energy security, and fuel diversity. DER can lower consumer prices, improve market efficiency, and allow consumers to take greater control of their electricity use and costs through a variety of new technologies.”<sup>4</sup>

AEMA, thus, recognizes the contribution DERs have made to resilience and recommends that those resources be included in the EMP as resilient resources.

### **Policies for Increasing Distributed Energy Resource Deployment.**

AEMA asserts that DERs can provide cost-effective and innovative approaches to power production and delivery. New Jersey should seize the opportunity to accelerate DER deployment and address any remaining barriers to unlocking the benefits DERs provide to the grid.

AEMA recommends that the following policies be considered in the EMP and related state programs:

- 1) *Recognize Contribution of DER Resources:* New Jersey should include DERs as part of the solution in meeting both climate and resilience goals. In pilots, microgrids, for example, have reduced CO2 footprint by running in “carbon avoidance” mode. In attaching metrics to these goals, these resources will run accordingly and should be compensated for their contribution.
- 2) *Allow DERs to Compete for Replacement Power:* New Jersey should allow DERs to compete in all-source procurements with large, central infrastructure based projects such as transmission and utility scale generation. DERs, including demand response and energy storage, have been successful components of Non-Wires Solutions. For example, in New York’s BQDM program, mentioned above, DERs were deployed to defer traditional distribution and transmission investments, resulting in avoiding those expenses altogether.

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<sup>4</sup> Distributed Energy Resources Roadmap for New York’s Wholesale Electricity Markets, A Report by the New York Independent System Operator, January 2017, Page 4.  
[http://www.nyiso.com/public/webdocs/markets\\_operations/market\\_data/demand\\_response/Distributed\\_Energy\\_Resources/Distributed\\_Energy\\_Resources\\_Roadmap.pdf](http://www.nyiso.com/public/webdocs/markets_operations/market_data/demand_response/Distributed_Energy_Resources/Distributed_Energy_Resources_Roadmap.pdf)

- 3) *Create Incentives to Achieve Storage Target:* New Jersey has established “goals of 600 MW of energy storage by January 1, 2021 and 2,000 MW of storage by January 1, 2030.”<sup>5</sup> The BPU should include customer-sited energy storage in any analysis and incentives. Energy storage has unique attributes that will be important toward achieving multiple aspects of the NJ EMP, including reaching 100% clean energy and improving resilience, cost-effectively. For instance, storage has the ability to charge at times when renewable energy generation is in excess of demand and then discharge later when the system needs supply. A “Clean Peak Standard” could help incentivize greater storage to operate at these peak times. In conjunction, a new set of financial bridge incentives, such as the \$350 Million fund recommended in New York, are designated to jump start broad storage development and help move down the “cost curve” faster. .
- 4) *Improve RTO Market Design:* Provide for greater participation of behind-the-meter resources in wholesale markets so that DER benefits can be fully monetized and that those benefits can be stacked to take advantage of the full value of the resources. We expect that FERC will shortly issue an Order for DER that we hope will require each ISO to develop a participation model for DER resources; we would urge the State to work closely with PJM on implementing such an Order. In addition, the state should follow the ongoing PJM issue regarding “capacity opt-outs,” which should allow resources subsidized by state policy to reduce the state’s capacity bill. Ensure resources supported by the EMP are eligible for this process, and that the value this provides to New Jersey ratepayers is captured.
- 5) *Simplify Interconnection Processes:* For resources on the distribution system and behind the meter, it would be helpful for New Jersey to move forward on simplified interconnection process for those resources wishing to participate in the PJM market.
- 6) *Reform Utility Ratemaking Process:* Incentivize New Jersey utilities to embrace a 21<sup>st</sup> century grid, providing a new ratemaking framework to incentivize utilities to take actions that will support the deployment of DERs. A performance-based approach should be used to incentivize utilities to streamline interconnection procedures, collect and release system data, and incorporate DERs into capital planning processes.

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<sup>5</sup> Executive Order 28, <https://nj.gov/infobank/eo/056murphy/pdf/EO-28.pdf>

7) *Implement Utility Peak Shaving Demand Response programs*: Design programs as required under AB3723 that help customers reduce New Jersey's system peaks. These programs can be funded through the Societal Benefits Charge and designed for the benefits to optimally outweigh the costs, such as by hitting the system peaks effectively. PJM has Act 129 peak shaving programs that curtail load across the state during summer peaks; New Jersey can implement its own programs that focus on reducing costs to customers. Such programs have existed in New York and Pennsylvania for years. These programs work in tandem with wholesale market programs and customers can participate in both. As New Jersey works toward 100% clean energy, peak shaving is an important complement to intermittent renewable generation, such as, offshore wind. States, such as California and Massachusetts, which are anticipating heavy penetration of intermittent resources, have advanced the use of peak shaving. Demand response tariffs should provide adequate pricing and stability to open up and stimulate the market. The programs should give certainty to customers and project investors in order to attract investment in innovative technologies and applications.

**Conclusion.**

AEMA appreciates the opportunity to submit comments for consideration by the New Jersey Administration as the Governor develops the Energy Master Plan. Please consider AEMA a resource in identifying specific policies and technology solutions for deploying DERs across New Jersey. We are certain that the reliability, efficiency, cost-effectiveness, and emission profile of DERs can provide benefits to all consumers while growing jobs and stimulating the economy in New Jersey. Please do not hesitate to contact me should you have any questions regarding this filing.

Respectfully Submitted,



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