Cogentrix Energy Power Management, LLC

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Cogentrix Energy Power Management, LLC (CEPM)'s Response to the New Jersey Energy Storage Incentive Program (NJ SIP) 2024 Straw Proposal

Cogentrix Energy Power Management, LLC (Cogentrix) is pleased to provide these comments in response to the NJ SIP 2024 Straw Proposal. Cogentrix appreciates the Board of Public Utilities' (BPU) national leadership in effecting the transformation of the power sector in New Jersey and looks forward to remaining an industry partner in the transition.

By way of background, Cogentrix' s affiliates own, and Cogentrix and its subsidiaries operate and sell energy and capacity from, approximately 9,000 MW of electric generation facilities throughout the United States, including two natural gas fired plants in Lakewood, New Jersey.

Lakewood Cogeneration, a combined-cycle facility consisting of two combustion turbines and one steam turbine, has a base capacity of 265 MW. Essential Power OPP consists of two simple cycle configuration combustion turbines and has a base capacity of 336 MW. As a peaking facility, OPP is specifically designed to quickly reach full output when the highest level of electricity is consumed in our region within a specific timeframe.

Cogentrix is actively engaged in developing resources to physically pair large-scale battery storage devices with existing generating capacity. Cogentrix currently has five projects totaling 500 MW-2,000 MWh of battery storage resources undertaking the interconnection processes in ISO-NE and PJM.

In New Jersey, Cogentrix is proposing a 170 MW – 680 MWh battery installation located on the Lakewood, New Jersey site. Federal and state regulations, as well as the existing regional transmission tariff, do not yet seamlessly integrate these types of resources into the dispatch and operation of the market. Similarly, existing tariff-based wholesale market revenue is insufficient to support the project without additional state programmatic revenue.

Accordingly, Cogentrix is appreciative of the BPU's efforts in this proceeding. Below are the company's responses to the specific questions asked regarding grid supply energy storage.

1. **Should a performance incentive based on net avoided emissions be proposed only if PJM or another entity produces a day-ahead, marginal emissions signal?**

Cogentrix believes a performance incentive based on net avoided emissions should not be used. Any emissions signal is retrospective in nature and signals a historical situation and is not prospective in providing a signal of future conditions on which rational dispatch and financial decisions can be made. Correlating performance incentives based on emissions potentially runs counter to the existing dispatch curve challenging efficiency as well as meeting demand as needed.

2. **In the absence of a day-ahead emissions signal, should the SIP institute another form of performance incentive for Grid Supply projects?**
3. **What other changes or alternatives would you propose to the GHG Performance Incentive?**

This response addresses both questions 2 and 3.

For Grid Supply resources, the Massachusetts Clean Peak Standard (CPS) program is a good reference because it is based on solid market pricing mechanisms transparent to all market participants. Massachusetts has energy goals and policies very similar to New Jersey's and, in this context, the CPS will:

- Reduce on-peak energy prices
- Reduce on-peak emissions
- Maximize the value for ratepayers of the considerable investments made in renewable resources and in particular in offshore wind.

The Massachusetts CPS program is essentially a peak period demand reduction or load shifting program. In as simple a manner as possible, the CPS reduces the highest daily rate of emissions otherwise associated with peak demand periods by incentivizing storage resources to discharge during those peak periods and charge during the periods of peak solar and/or wind generation. The fundamental purpose of the CPS is to enable non-emitting, but non-dispatchable supply to be shifted to otherwise peak emission periods.

To implement a CPS to operate Grid Supply resources in New Jersey, the historical MER signal could be used as the basis for setting the hours of charging and discharging in the next annual or seasonal SIP year. By ensuring that Grid Supply resources were charging during the periods of highest wind generation, for instance, and discharging during peak demand periods, New Jersey could be certain that its zero emission wind resources were being optimally utilized during the periods of otherwise highest emissions.

The benefit of using a set time of day for storage operations is simplicity and transparency. In general, the hours of the day experiencing the highest MER will also be those hours experiencing the highest marginal energy prices. However, rather than incurring the BPU's cost and time in developing an administrative method for tracking storage project performance based on different

MER signals, a cleaner, simpler, and more transparent approach would be an annual marking of specific weekly, monthly, seasonally, etc. hour periods for charging and/or discharging.

4. How can the Board mitigate the risk of Grid Supply projects not operating/performing after receiving upfront incentives?

a. Are the reporting requirements proposed herein sufficient?

b. Should there be a clawback clause to recover fixed incentive payments from energy storage systems that cease operating shortly after coming online?

c. What should be the metric of success for a specific project be (e.g., discharging power during peak demand periods) for Grid Supply energy storage systems? In other words, what metrics should the Board consider when evaluating operation?

Cogentrix cautions the BPU against overcomplicating its process by evaluating run-time and failure-to-run as measures of success.

Any grid supply energy storage project will be part of the PJM capacity market. Any failure-to-run when called upon by PJM will subsequently result in a capacity penalty from PJM. As such, the BPU may consider a corresponding clawback clause that allows the board to recover a prorated amount of the fixed incentive payment for any failure-to-run upon dispatch.

As a PJM capacity resource, the energy storage system operator must formally notify PJM if it is ceasing operations. As such, any formal notification and operation cessation should correlate into the termination of any fixed incentive payments from the BPU.

Regarding measurable metrics to gauge success, the NJ SIP program is a new program subject to change in future years. As noted in the straw proposal, Cogentrix supports the BPU staff's intention to recommend that the NJ SIP go through a year one review process twelve months after initiation of the program. It is equally important that the review process includes current and potential energy storage operators and investors for input. The progression of the program rules should be transparent, equitable and stable to provide a durable and predictable revenue stream.

5. Should Grid Supply energy storage projects that replace or demonstrably reduce the run-time of fossil-based peaker plants in overburdened communities be evaluated solely on price or receive additional weight or a preference in competitive solicitations? If additional weight or preference is warranted, please specify how.

Cogentrix supports the BPU providing additional weight or preference in competitive solicitations to energy storage projects that reduce the run-time of fossil peaker plants in overburdened communities.

As noted in the straw proposal, BPU staff believe that grid supply projects that replace peaker plants in overburdened communities or co-locate with such peaker plants and demonstrably reduce their run-time and emissions may provide significant local benefits.

Reinforcing this belief, the NJ Department of Environmental Protection (NJ DEP) has created a series of regulatory reforms called NJ PACT: Protecting Against Climate Threats. As part of NJ PACT, the department's Climate Pollutant Reduction (CPR) program includes potential rulemaking to allow electric generating units (EGUs) to utilize clean energy options to meet its compliance obligations. NJ DEP hopes to encourage the development of clean energy, ensure reliability, and curtail leakage as the state seeks to reduce GHG and meets its clean energy goals.

As part of the Clean Energy Compliance Options for EGUs proposed rulemaking, generators may use clean energy options like energy storage to reduce GHG emissions below designated thresholds.

Proposed energy storage projects should receive additional weight or preference for **each** of the three following criteria:

- Support generators' compliance with the designated GHG emissions thresholds established under NJ PACT
- Co-locate adjacent (same property) to existing peaker generator thus eliminating the need for additional infrastructure including new or upgraded transmission
- Located in an overburdened community as designated by the New Jersey Environmental Justice Law

10. Do any aspects of this program need to be modified to address NJ Legislature Bills S225/A4893, should the bill be signed into law?

It should be noted that S225 does not have a corresponding version in the Assembly (A4893 is from a previous legislative session).

As drafted, the straw proposal provides additional information and clarity building upon the proposed pilot program that would be established under the proposed legislation.

Cogentrix would also like to briefly comment on additional topics raised in the straw proposal.

- Cogentrix agrees and supports an annual competitive solicitation with specific amounts/ranges for a given fiscal year. As market conditions and costs change, flexibility will be paramount in leading to a successful energy storage program.
- In addition, Cogentrix supports fixed incentive levels that meet approximately 40 percent of the full installed cost of a project. This is consistent with funding opportunities provided by states with existing and proposed energy storage programs.
- Cogentrix supports changing to a refundable bid participation fee. A refundable mechanism will encourage additional project participation.
- Subsequently, Cogentrix supports the creation of a pre-development fee and additional criteria as outlined in the straw proposal when responding to a competitive solicitation. This will help ensure that only viable and realistic projects are participating.

- Finally, Cogentrix opposes the 550-day timeline to achieve commercial operation within receiving an award. As an experienced developer and operator of co-locating energy storage systems with existing peakers, the 550 days seems arbitrary and runs counter to operating experience and industry norms especially considering current supply chain challenges facing the energy storage industry. A more palatable alternative for energy storage developers would be a timeline twice that length (1,100 days) with designated benchmarks throughout the development timeline to ensure operation.