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VIA ELECTRONIC MAIL
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Sherri L. Golden, RMC
Secretary of the Board
Board of Public Utilities
44 South Clinton Avenue, 1st Floor
P.O. Box 350
Trenton, New Jersey 08625-0350

RE: In the Matter of the New Jersey Energy Storage Incentive Program
BPU Docket No. QO22080540

Dear Secretary Golden:

Please accept the within correspondence as the submission of Atlantic City Electric Company in response to the Board of Public Utilities Revised Stakeholder Notice of September 11, 2023, in the above-referenced docket.

Pursuant to the Board's directive, these comments will be uploaded via the Post Comments button on the Board's Public Documents Search tool.

We thank the Board and all parties for the courtesies extended. Feel free to contact the undersigned with any questions.

Respectfully submitted,

Cynthia L.M. Holland
An Attorney at Law of the
State of New Jersey

Enclosure

ATLANTIC CITY ELECTRIC COMPANY
NEW JERSEY ENERGY STORAGE INCENTIVE PROGRAM
BPU DOCKET NO. QO22080540

RESPONSE TO STAFF REQUEST FOR INFORMATION

QUESTION NO. 1. Utility Ownership/Dispatch Control

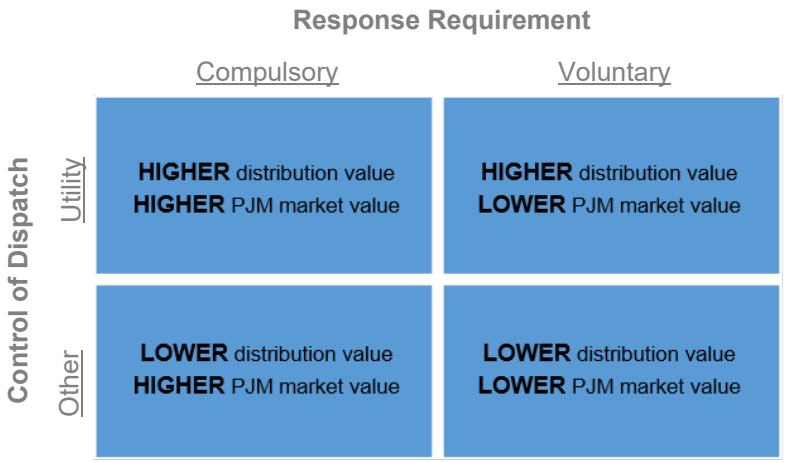
1.1 What are the advantages and disadvantages of utility control versus non-utility control of energy storage systems?

1.2 For Distributed resource Performance-based Incentives, should responding to a utility signal be compulsory or voluntary?

Atlantic City Electric Company ("ACE" or the "Company") has provided response to questions 1.1 and 1.2 in this section.

Energy storage is a versatile resource that can have a broad range of benefits such as enhancing electric distribution company ("EDC") operations, optimizing and supporting the electric grid, and enriching the customer experience. ACE supports the New Jersey Storage Incentive Program's ("NJ SIP" or "SIP") identified need for deploying transmission- and distribution-level storage resources, and providing frameworks to maximize the wide range of grid services these resources can provide.

As depicted in the figure below, and expanded upon throughout this response, utility control of storage assets and compulsory response to system needs maximizes the value that these assets can provide to the electric distribution system and to wholesale markets and thereby maximize the overall value to customers. Recognizing that there are trade-offs with control type, response requirements, and customer value, customers owning behind-the-meter resources should be able to select from multiple programs with varying incentive levels to match their needs.



Utility-controlled energy storage devices provide the greatest distribution system benefit

ACE is the only entity that plans and operates the distribution system within the communities it serves. Accordingly, the Company is the only entity that can actively manage and control energy storage devices to meet longer-term planning needs and real-time operational needs. At a minimum, electric utilities must have the ability to monitor and override dispatch storage assets when required to preserve reliability on the distribution system. If not properly managed, aggregated DER present potential reliability risks to the distribution system as well as the wholesale market or "bulk" power system, as noted in the National Electric Reliability Corporation's "2023 ERO Reliability Risk and Priorities Report."[1]

Further, direct utility control of storage assets incentivized through the SIP would allow ACE distribution system planners to integrate distributed storage in planning and operations. For example, utility control would allow ACE system operators to call upon these resources to discharge during peak demand periods to mitigate investment needs or charge during peak solar output periods to balance the system and enable higher solar penetrations. ACE currently evaluates front-of-meter storage solutions when distribution system capacity upgrades are needed. Given the higher costs of storage compared to traditional upgrades, this option is rarely the most cost-effective solution for customers today. If EDCs are permitted to participate in the SIP, the incentives could reduce this financial barrier and allow for greater use of energy storage as non-wires alternatives.

[1] Link at: nerc.com/comm/RISC/Related Files DL/RISC_ERO_Priorities_Report_2023_Board_Approved_Aug_17_2023.pdf

Further, utility control of distributed storage resources most efficiently enables not only distribution value streams but also value stacking of wholesale value streams. For example, utilities can aggregate and bid energy storage resources into the wholesale markets under current PJM rules.

Energy storage programs that require compulsory response provide the greatest wholesale system benefit

For any distributed resource to provide distribution system services, the Company must be able to rely on the asset, similar to existing infrastructure. If response to a utility signal is voluntary, then the Company would not be able to rely on the asset to provide predictable and measurable distribution services. Realizing this, the highest value of storage resources incentivized through the SIP require compulsory response to utility calls for power.

Further, compulsory response, with direct EDC control, provides the greatest assurance that the energy storage resources will operate when charging or discharging produces wholesale market value. PJM's market participation rules for energy, capacity, and ancillary services markets have resource availability requirements, and with a voluntary, or uncertain response rate, aggregators (including ACE), would need to bid fewer resources into the market to avoid over-estimating the voluntary response rate.

1.3 For Grid Supply resources Performance-based Incentives, should responding to a market signal be compulsory or voluntary?

To maximize customer value of the storage assets incentivized through customer rates, resources participating in the NJ SIP should be required to seek market compensation to the greatest extent possible, and the New Jersey Board of Public Utilities ("BPU") should consider the market compensation potential when establishing Grid Supply incentive levels.

PJM's market participation rules should define the specific requirements regarding response to market signals. As outlined in ACE's response to 1.1 and 1.2, compulsory response provides the greatest potential PJM market value.

QUESTION NO. 2. Installed Storage Targets, Deployment Timelines and Capacity Blocks

2.1 How should capacity blocks be structured and proportioned, both within each component of the NJ SIP (Grid Supply and Distributed) and relative to each other?

ACE does not offer a response to this question at this time but reserves the right to provide a response at a later time.

2.2 Should the proposed "First-Come, First-Served" application process be changed to a "First Ready, First-Served" process?

ACE's current interconnection process is based on the principle of "First-Come, First-Served". The Company prefers to continue this model because it clearly establishes a queue of projects at the beginning of the process and allows the ACE interconnection team to efficiently and effectively manage the queue. Additionally, the proposed alternative, the "First-Ready, First-Served" model, would require the interconnection customer to pay a readiness fee to show that they are ready to interconnect their storage. At this time, it is unclear that the value produced by a "First-Ready, First-Served" process is sufficient to require customers to incur this additional expense. Moreover, the Company cannot charge a rate or fee for service, such as a "readiness fee," without BPU approval. Thus, to enable the "First-Ready, First-Served" model, the BPU would be required to take additional action.

2.3 How should the program be designed to avoid or minimize interconnection delays? Should the interconnection process be modified for accommodating energy storage and if so, how?

New Jersey's existing interconnection rules are designed for generation projects, as supported by the BPU's enabling legislation. Storage is not legally defined as generation or a Class I Renewable under New Jersey law. *See* N.J.S.A. 48:3-51 and –87.8. As the Company has stated in prior comments, storage can act as a distribution/transmission asset based on its use case. It likely may not be advantageous from a legal or policy perspective for the BPU to narrowly define Storage as generation, limiting its potential benefits to the State.

That said, New Jersey's current Interconnection Regulations for Class I Renewable Generation have provisions that allow EDCs to remove unresponsive projects from the queue. If these regulations are extended to eventually include storage, or similar provisions made for storage, then the Company understands that energy storage projects would be treated in the same manner to avoid delays. Additionally, there would need to be detailed procedures adopted that establish how energy storage projects are studied and

interconnected. Again, assuming that storage would be treated as a generation source, the interconnecting customer would need to clearly state the intent of the storage to allow EDCs to process and review applications according to the intent.

Given the legal, policy, and practical complexities of storage interconnection (including the question of whether storage is a generation resource or a distribution/transmission asset or both), ACE proposes the formation of a working group to develop recommended interconnection regulations specifically for storage.

QUESTION 3. Incentive Structure

3.1 Incentives are meant to cover a portion of the fully installed cost of an energy storage system. What is the fully installed unit cost (in $/kWh) for energy storage systems at present, and estimated to be each year through 2030? How do New Jersey-specific costs vary from these estimates? Please provide links to your references.

3.2 What are the best public data sets for energy storage costs?

For questions 3.1 and 3.2, ACE does not offer a response at this time but reserves the right to provide an answer at a later time.

3.3 Should Fixed Incentives be assignable to an aggregator? Why or why not?

ACE does not support assigning fixed Incentives to aggregators. Traditionally, aggregators' role in energy markets is to collect and deploy resources to meet system needs and engage in market activities and not project development. Developing a structure to provide upfront fixed Incentives to an entity not necessarily involved in the project development could create unnecessary cost in administration of the program to allow incentive disbursement.

3.4 Should a Distributed energy storage resource that can provide grid services have the ability to opt in to either the Grid Supply or the Distributed storage program, for both the Fixed and Performance-based incentives?

ACE does not support providing distributed resources the option to participate in the Grid Supply Performance-based Incentives. The NJ SIP states that "grid services" within the "Grid Supply" program area produce greenhouse gas ("GHG")-reduction benefits. To verify Performance-based Incentive compliance, NJ SIP requires comparing storage charging and discharging patterns with greenhouse gas emissions rates. A Grid Supply resource will be independently metered and subject to monitoring requirements of ACE's

interconnection process. A distributed resource is not subject to the same requirements and would not, by default, have this metering or monitoring. Thus, allowing distributed resources to opt-in to the Grid Supply program would likely create higher program costs in order to implement the metering and monitoring required to verify the distributed resource's environmental benefits.

3.5 The Straw proposes the use of the PJM Marginal Emission Rate ("MER") signal as a basis for Performance-based Incentives for Grid Supply energy storage systems. Is or will the PJM MER be sufficiently developed to use to calculate NJ SIP Performance-based Incentives?

ACE does not offer a response to this question at this time but reserves the right to provide an answer at a later time.

3.6 Is there a different methodology that can be used to determine Performance-based Incentives, such as a Peak Demand Reduction program?

ACE supports the NJ SIP proposal for EDCs to set the Performance-based Incentive structure for distributed resources. These incentives should be set in a manner that maximizes distribution system benefits, wholesale system value, and environmental benefits.

The NJ SIP stated that Performance-based Incentives for Grid Supply resources should be tied to GHG reduction. By focusing on a single value-stream, the proposed Grid Supply incentive structure does not allow for these energy storage resources to achieve their full scope of benefits to customers, via wholesale market services or potential distribution system value. To address this concern, ACE has two specific recommendations:

1) The NJ SIP should allow for utility ownership of Grid Supply energy storage resources. As discussed above, only the electric distribution utilities, including ACE, can identify investment and operational needs within the distribution system and utility ownership and operation allows those values to be unlocked for customers. To enable similar value for third-party owned Grid Supply storage, the EDCs would require control of the assets and integration into utility operations.

2) The NJ SIP should be modified to allow EDCs to set Grid Supply Performance-based Incentives, recognizing that the value created may vary among distributed and Grid Supply resources.

3.7 If a Peak Demand Reduction program were to be developed, how should it be structured? What other states have similar programs that New Jersey should use as a benchmark?

For distributed storage, a Peak Demand Reduction program should be structured similarly to other demand response programs in the region that cycle air conditioners and other equipment during peak demand times. Storage owners would enroll their systems in a utility-implemented program and would receive payment or bill credits for discharging their battery during peak demand times. The utility offering the program, in agreement with the BPU, would need to determine the incentive payment, time and length of battery dispatch, and other program terms and conditions. The energy storage owner would be required to have equipment and an inverter compatible with the utility communication technologies and would be responsible for ensuring the system's availability to receive incentive payments.

To avoid double counting, the program would not be available to energy storage owners participating in PJM, overlapping retail programs or other activities with an aggregator or curtailment service provider.

3.8 What degree/percentage of Peak Demand should be targeted for reduction? What effect would such a program have on GHG emissions?

ACE does not offer a response to this question at this time but reserves the right to provide an answer at a later time.

3.9 The Straw proposed that each EDC establish its own level of Performance-based Incentives. Should EDCs establish EDC-specific performance incentives, or should the incentive be standardized and common to all EDCs?

ACE fully supports the NJ SIP proposal that each EDC establish its own level of distributed Performance-based Incentives. Allowing each EDC to establish its own level of performance incentives encourages development of storage resources in a manner that is most beneficial to the distribution grid and EDC customers. This provision is critical to enabling utilities to provide payments based on response type and resulting value at the resource's geographic region.

3.10 Should energy storage owners be permitted to opt in, or be subject to utility control, in order to be eligible for Distributed performance incentives?

Recognizing that there are trade-offs with control type, response requirements, and customer value, customers owning behind-the-meter resources should be able to select from multiple programs, a compulsory and voluntary, with varying incentive levels to match their needs.

To maximize value of distributed storage and for reasons provided in the Company's response to 1.1 and 1.2, ACE recommends that the BPU enable utilities to create programs that require compulsory response. The compulsory program could be fashioned so that 1) customers agree to allow the utilities to control and operate the battery storage resources during times of distribution system need or 2) the customers are required to respond to utility events.

The voluntary distributed program would be similar to what is currently included in the NJ SIP, in which storage resources receive payments for voluntary participation. A passive distributed program provides greater flexibility to customers, but, as discussed above, this program design does not provide utility system planners the level of certainty required for reliable operation of the distribution system. Thus, ACE expects that the distribution system benefits of this approach would be minimal and the distribution-system performance payment for the voluntary distributed program would reflect that value. Further, as also discussed above, the wholesale system benefits of a voluntary participation program would be lower as well.

The utilities should not be required to set specific performance hours for control in the distributed program but, rather, propose requirements concerning the EDC notifying distributed program participants of charging and discharging events that would allow these customers visibility into operation of their resources.

3.11 How should incentives be structured for thermal storage systems?

ACE does not offer a response to this question at this time but reserves the right to provide an answer at a later time.

3.12 Under what circumstances, if any, should Distributed resources be able to opt in to Grid Supply Performance-based Incentives?

See ACE's response to 3.4.

3.13 Large projects and long-duration projects have the potential to qualify for significant incentives. Should incentive caps be applied in this program? If so, how (for example, by customer, project, developer, duration or meter or other method)?

The Company does not have a specific stance on incentive caps for large projects and long-duration projects; however, larger grid supply projects will impact the distribution system in a manner analogous to a generator and a load. The NJ SIP lays out a vision that storage resources will reduce distribution system costs. Contrary to this vision, larger grid supply resources that are not specifically developed to provide distribution grid services may incur costs associated with a necessary build out of the distribution system to accommodate these resources and continue safe and reliable operations.

3.14 Should a cap be set such that the sum of federal and state incentives does not exceed a certain amount? If so, please provide details.

ACE supports New Jersey storage owners and operators accessing all possible State and Federal incentives. To advance the customer affordability of the NJ SIP program, the Company supports a cap on cumulative incentives (NJ SIP incentives plus all external funds). This cap should be designed to increase the likelihood that NJ SIP funds are used to offset costs and not over incentivize NJ SIP resources through providing NJ ratepayer funds to storage resource owners.

3.15 What provisions should be included in the program for monitoring, reporting and evaluation in order for deployed projects to maintain eligibility for incentives that are paid over time?

ACE would need to develop monitoring, reporting, and evaluation requirements, and these requirements will be dependent on the final NJ SIP design. These requirements will be necessary to properly distribute incentives to qualifying customers.

3.16 How can BPU structure NJ SIP Performance-based Incentives to both promote value stacking and prevent double compensation?

ACE supports a simple structure for NJ SIP Performance-based Incentives so that the incentives are easy for customers to understand. ACE also recognizes that optimizing value stacking of storage resources to provide the most comprehensive set of value streams is complex and requires a detailed understanding of the real-time needs of the power delivery system.

The current Grid Supply Performance-based Incentive structure is based on the single value stream based on GHG reductions, which does not provide customers the maximum value from storage resources. To provide greater value, ACE recommends:

1) the NJ SIP allow for utility ownership of Grid Supply energy storage resources so that the EDC can identify needs on its distribution system and own and operate storage resources that will capture those distribution system benefits; and

2) the EDCs set the Grid Supply Performance-based Incentives in a manner similar to that of distributed resources, recognizing that the value created may vary among distributed and Grid Supply resources.

QUESTION 4. Overburdened Community Incentives

4.1 Staff is considering establishing both an adder and a capacity block for OBCs. What size should the capacity blocks be over time as a percentage of the overall Distributed segment? How much should the adder be in 1) $/kWh or 2) as a percentage of the base incentive?

ACE supports the NJ SIP goals of providing customers in overburdened communitie“ ("OBCs”) additional incentives, and the Company most strongly supports incentive structures that allow customers in OBCs to voluntarily adopt behind-the-meter storage.

4.2 How can BPU assure that the incentive structure chosen will in fact provide benefits to OBCs?

ACE does not offer a response to this question at this time but reserves the right to provide an answer at a later time.

QUESTION 5. Other Questions

5.1 What actions, if any, should BPU take to improve access to the energy storage value stack as part of implementing the NJ SIP?

See the response to 3.16.

5.2 How will Federal Energy Regulatory Commission ("FERC") Order 2222 affect New Jersey's energy storage market? What changes should the Board make to the NJ SIP to take advantage of PJM's pending implementation of FERC Order 2222?

While the impact on energy storage deployment volume is unknown, FERC's Order 2222 was developed to lower the barriers to entry for smaller (less than 5 MW), distribution-level connected energy storage to participate in PJM energy, capacity, and ancillary service markets.

Storage participation in an aggregation under FERC Order 2222, through a utility or other aggregator, will have specific metering, telemetry, and utility communication requirements. PJM also has proposed guidelines for customers that have multiple demand response or other distributed energy resources located behind a single meter. Once FERC finalizes and approves the PJM guidelines, the BPU should review the NJ SIP requirements for potential integration into the program requirements.

5.3 Are modifications to the NJ SIP needed to maximize the ability of energy storage developers to access federal investment tax credits or other federal incentives?

5.4 What provisions, if any, should be established for interconnection of zero-export energy storage facilities (that is, energy storage facilities that do not inject power back into the grid and only supply power to on-site load)?

5.5 What specific best practices regarding rates and tariffs from other states should be incorporated?

For questions 5.3 through 5.5, ACE does not offer a response at this time but reserves the right to provide an answer at a later time.

5.6 Should energy storage be utilized and compensated in the Triennium 2 Energy Efficiency /Demand Response proceeding as an allowable Demand Response resource? If so, what changes, if any, should be made to the NJ SIP design to avoid potentially providing double compensation for the same service?

For the current timing of the Triennium 2 Energy Efficiency/Demand Response filing due on October 2, 2023, ACE does not believe there is sufficient time to design new energy storage programs that it can include in the filing. However, energy storage should be considered as an allowable resource as part of a future demand response proceeding.

5.7 How should energy storage systems be metered and measured? Can an inverter serve this function? What role should advanced metering infrastructure ("AMI") play in the NJ SIP?

The metering and measurement requirements of energy storage systems will depend on the function the battery serves and the details of the participating program.

From a measurement and metering perspective, inverters, which are typically customer-owned equipment, cannot serve these functions on their own. ACE requires revenue-grade metering that the Company tests and ACE and the BPU approve. Similarly, from a system-monitoring perspective, inverters rely on a medium (e.g., radio, fiber) to communicate information back to the utility. The ability of an inverter's communication medium to provide steady accessibility with minimal service disruptions and provide the security needed for the utility's safety and reliability demands may vary by use case.

Energy storage introduces new capabilities that create an opportunity to measure the operational state of charge so that system operators can assess how much energy is currently stored among interconnected devices that can be discharged for operations. If the energy storage device is not behind the customer's meter, then placing it behind an AMI meter to provide data (e.g., load, voltage, etc.) to the utility would be beneficial.

5.8 Please provide any other comments on the NJ SIP

ACE does not offer a response to this question at this time but reserves the right to provide an answer at a later time.