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VIA ELECTRONIC MAIL ONLY

Carmen D. Diaz, Acting Secretary
New Jersey Board of Public Utilities
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Re: In the Matter of the New Jersey Energy Storage Incentive Program

Docket No. QO22080540

Dear Acting Secretary Diaz:

On September 29, 2022, the New Jersey Board of Public Utilities ("BPU" or "Board") staff ("Staff") issued the New Jersey Energy Storage Incentive Program ("NJ SIP") Straw Proposal, which included a request for comments. Jersey Central Power & Light Company ("JCP&L" or the "Company") appreciates the opportunity to comment on the Straw Proposal. The Company hopes that the Board will find JCP&L's comments and suggestions helpful as it begins its consideration of this important topic.

I. Background:

New Jersey has one of the most ambitious storage targets in the nation, with a statutory mandate to achieve 2,000 megawatts ("MW") of installed energy storage by 2030.[1] To achieve this goal, the Straw Proposal creates two energy storage programs with specific protocol and incentives for front-of-meter and behind-the-meter energy storage systems. Specifically, the Straw Proposal is intended to incentivize stand-alone energy storage devices physically connected to the electrical system of a New Jersey electric distribution company ("EDC").[2]

As recommended in the Straw Proposal, NJ SIP incentives will be available to energy storage devices that are located either in-front-of-the-meter ("Grid Supply") or behind-the-meter

[1] *New Jersey Energy Storage Incentive Program Straw Proposal*, Docket No. QO22080540 (2022) at 1 ("Straw Proposal").
[2] *Id.*

("Distributed Resources") (collectively "energy storage resources").[3] Under the Straw Proposal, at least 30% of the NJ SIP incentive will be provided via fixed annual incentives, paid in dollars per kilowatt-hour ("$/kWh") of energy storage capacity, contingent on satisfactory up-time performance metrics.[4] The Straw Proposal requires the NJ SIP fixed incentive payments to be established through a declining block structure and recommends that the market segments for both the Grid Supply and Distributed Resources each have their own pricing structure.[5] Under the Straw Proposal, the remaining NJ SIP incentive will be provided through a pay-for-performance mechanism. For Grid Supply, the Straw Proposal payment is based on the amount of carbon emissions abated through operation of the energy storage device, determined by measuring the marginal carbon intensity of the wholesale electric grid (Marginal Emissions Rate set by PJM Interconnection, LLC ("PJM")) at the time the energy is discharged, minus the carbon intensity of the energy drawn during the charging interval for the resource.[6] For Distributed Resources, the Straw Proposal provides for payment based on the successful injection of power into the distribution system when called upon by the EDC during certain performance hours, established by each EDC.[7] Under the Straw Proposal, a portion of the Distributed Resource incentive program will be reserved for projects located in, or directly serving, overburdened communities.[8]

The Straw Proposal currently prohibits EDCs from owning and/or operating energy storage devices.[9] To entice private owners and operators, the Straw Proposal recommends that, in addition to the NJ SIP incentives, private investors be allowed to own and operate the energy storage devices, allowing them to "stack" revenues from the wholesale electricity market, to utilize the Distributed Resource to actively manage their energy usage at the distribution level and reduce electricity costs, or to participate in a Distributed Energy Resource ("DER") Aggregation service.[10]

The Straw Proposal touts that the NJ SIP is intended to provide ratepayers with a variety of benefits such as carbon savings, hosting capacity improvements, and improving system resilience. The Straw Proposal further asserts that the NJ SIP is expected to drive down costs for storage deployment.[11]

II. **Comments**:

JCP&L generally supports the Board's efforts to promote the development of energy storage resources in New Jersey to achieve the Governor's goal of 2,000 MW of installed energy storage by 2030. Energy storage is an important component of maintaining system balance in

[3] *See id.*
[4] *Id.*
[5] *Id.*
[6] *Id.* at 2.
[7] *Id.*
[8] *Id.*
[9] *See id.* at 11.
[10] *Id.* at 2.
[11] *Id.*

response to the increasingly intermittent and variable loads associated with the continued integration of renewable resources onto the grid, coupled with the electrification of transportation, building space, and water heating. JCP&L believes that properly deployed and administered energy storage can help balance these variable loads (along with the use of energy efficiency and peak demand reduction programs) by offering a method to manage load and store power for use when customers need it most. In addition, JCP&L agrees that properly placed and utilized energy storage resources have the potential to reduce the cost of electricity for customers by storing it when electricity is inexpensive and selling it when demand is high. Properly deployed energy storage resources may also increase the reliability and resiliency of the electric grid.

A. Disallowance of Utility Ownership:

a. Straw Proposal:

The Straw Proposal recommends "that the Board adopt a storage business model that encourages private ownership and operation of energy storage devices, consistent with New Jersey's restructured competitive market structure."[12] The Straw Proposal further states that "[w]hile ratepayers will support investment in storage resources, the commercial and operational risks will largely be borne by private investors."[13]

b. JCP&L Comments:

JCP&L is concerned that the Straw Proposal's prohibition on utilities owning and operating energy storage resources will artificially hinder the State's ability to achieve its goals of deploying large scale Grid Supply resources and Distributed Resources at the necessary levels to meet energy storage MW targets as well as its other stated goals of reducing greenhouse gases ("GHG"), improving grid reliability, community resilience, and reduced electricity costs for customers. To achieve these goals, all available resources, including EDC owned energy storage resources, must be leveraged under the NJ SIP program. EDC participation is essential to ensure a robust and smooth storage build out and integration that promotes stated objectives.

EDCs are in the best position to evaluate where energy storage resources should be optimally located to provide the most benefit for their systems at the least cost to customers. While Distributed Resources have typically focused on maintaining or enhancing reliability and resiliency, as well as providing targeted voltage support and control, properly located Distributed Resources also have the potential to provide environmental benefits. Furthermore, the amount and placement of energy storage resources in a manner that will benefit and not harm the distribution grid is dependent on the unique needs of each EDC.

The EDCs in New Jersey have and continue to play a vital role in developing solar energy, electric transportation, and facilitating Energy Efficiency and Peak Demand Reduction programs. The development and deployment of energy storage resources should not be an exception when

[12] *Id.* at 11.
[13] *Id*.

there will likely be overlapping initiatives between energy storage and these other programs, such as system demand reductions as part of the EDCs' energy efficiency programs.[14] In both California[15] and New England, which have successfully launched energy storage initiatives similar to what is contemplated in the Straw Proposal, utilities have been allowed to own storage resources and to be an important part of the storage solution.[16] Similarly, New Jersey's EDCs have the motivation to develop energy storage resources that can be consistently available to provide benefits through Grid Supply or by the use of stationary or mobile batteries that are exclusively available when needed by the utility and not utilized for competing obligations. Persons representing various industry sectors have agreed in oral comments in this proceeding that EDCs should not be precluded from owning and operating storage.[17]

For these reasons, the Board should revise the NJ SIP to allow EDCs to build, own, and operate energy storage resources, which would support and expedite achieving the State's energy storage goals. If, however, the Board chooses to limit or exclude EDC ownership and/or operation of energy storage resources under the NJ SIP, it should make clear that EDCs may still own and operate storage assets that are not participating in the NJ SIP when such storage assets are being used as a distribution and/or transmission resource. Moreover, if EDCs are excluded from the NJ SIP, projects participating in the NJ SIP should not be given preferential treatment and allowed to displace EDC proposed storage projects.[18] As previously noted, there are significant potential reliability and resiliency benefits associated with properly integrated energy storage resources. If

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[14] *See* Straw Proposal for New Jersey's Energy Efficiency and Peak Demand Reduction Program, at 74 (March 2020).

[15] *See* Tracking Progress - Energy Storage (ca.gov).

[16] "In most New England states, utilities have been granted the right to own energy storage assets." "This can be helpful in driving large-scale energy storage markets." *Energy Storage Policy Best Practices from New England Ten Lessons from Six States*, Todd Olinsky-Paul, Clean Energy Group Clean Energy States Alliance (August 2021) at 30 & n.58 (noting "In Maine, utility storage ownership rights may still need some clarification".)

[17] For example, Melissa Chan's November 4, 2022 oral comments on behalf of Fermata Energy stated that the commission should "consider pathways for utilities to own parts of or all of assets that are connecting to the grid and providing services such as batteries that may be parts of the batteries or equipment and infrastructure that supports the connection that is beyond, say grid upgrades or easements." Jeffrey Simpson's November 4, 2022 oral comments on behalf of Riggs Distler & Co's provided that "with their expertise in grid management and unparalleled understanding of customers' energy uses utilities are perfectly positioned to develop these energy storage resources that help the state achieve its goal of having 2000 MW of energy storage in place by 2030. The utilities also value different energy storage benefits such as reliability and resiliency that will be required for a sustainable future." Judy McElroy's November 4, 2022 oral comments on behalf of Fractal Energy Storage Consultants stated that "EDCs should be able to have a role and also excluding them right out of the gate can create a dangerous precedent for future programs and incentives."

[18] The language of the current Straw Proposal may be read as a blanket prohibition on utilities owning and operating energy storage resources.

the Board moves forward with a blanket prohibition against EDCs owning and operating energy storage resources, it will severely limit the opportunity for realization of those reliability and resiliency benefits.

B. Storage Definition:

a. Straw Proposal:

The Straw Proposal defines storage as: "A device that is capable of absorbing energy from the grid or from a [DER], storing it for a period of time using mechanical, chemical, or thermal processes, and thereafter discharging the energy back to the grid or directly to an energy using system to reduce the use of power from the grid."[19]

b. JCP&L Comments:

The Company supports the above storage definition and believes that it is sufficiently broad to allow for the integration of current and future technologies. Care should also be taken to ensure that energy storage properly aligns with appropriate interconnection procedures and standards.

C. Incentive Levels:

The Straw Proposal recommends that NJ SIP incentives be comprised of two main payments: (1) a fixed incentive, measured in $/kWh of storage capacity and paid annually to both Grid Supply and Distributed Resources, for a fixed term of years, contingent on satisfactory up-time performance metrics; and (2) a performance-based incentive tied to the grid and environmental benefits created by the storage device.[20]

1. Declining Block Structure:

a. Straw Proposal:

The Straw Proposal recommends using a declining block structure to establish a market-based incentive. It seeks comment on whether the initial annual incentive should be in $/kWh for both Grid Supply and Distributed Resources.[21] It also seeks comment on the best way to formalize incentive levels in a manner that considers both ratepayer impact and the need to allow the declining block mechanism to reveal the competitive incentive level for storage.

The Straw Proposal recommends requiring storage developers to select between the NJ SIP or the Competitive Solar Incentive ("CSI") Programs. It also seeks comment as to how best to allow developers the flexibility to select which program to participate in.[22]

[19] Straw at 12.
[20] *Id.* at 15.
[21] *Id.* at 17.
[22] *Id.*

b. JCP&L Comments:

The Company generally supports the Straw Proposal's use of a declining block structure, including the proposed use of $/kWh incentives, for both Grid Supply and Distributed Resources, to help achieve the storage requirements at lower costs in subsequent auctions. Incentive level pricing and block size should be determined by Staff (or a program administrator) and not by the EDCs. The Grid Supply annual incentive should be the same for all EDCs to prevent a project from being sited in one EDC territory and that project seeking incentives from another EDC. Additionally, the blocks should be evaluated and potentially adjusted on an annual basis, similar to the existing Administratively Determined Incentive ("ADI") process for solar. Assuming the NJ SIP program charges are applicable to all customers and non-by passable, and consistent with the intent of N.J.S.A. 48:3-87.8, which puts a great emphasis on the ratepayer benefits and costs associated with energy storage, cost caps should be established to ensure customer bill impacts are managed to the desired level, similar to current cost caps for Renewable Portfolio Standards costs. Otherwise, the NJ SIP has the potential to significantly increase customer bills if left unmanaged.

The Company agrees with the Straw Proposal's requirement that energy storage developers not be allowed to participate in both the NJ SIP and the CSI at the same time. JCP&L also agrees that energy storage developers should be afforded the flexibility to select which program, CSI or NJ SIP, benefits their project the most. The Company does not oppose allowing a project that is not selected for one program from being permitted to apply for the other program. This will ensure that projects have the opportunity to seek appropriate incentives but that ratepayers are not overburdened by any individual project by having to pay two different forms of incentive.

2. Overburdened Communities:

a. Straw Proposal:

The Straw Proposal seeks to ensure that an equitable share of Distributed Resources are placed into overburdened communities.[23] To ensure that Distributed Resources locate in overburdened communities, the Straw Proposal seeks feedback on the following options: (a) establishing an adder of to be determined value per kWh of energy storage capacity to the fixed portion of the incentive for projects located in overburdened communities; or (b) establishing a separate capacity block limited only to customers in overburdened communities; or (c) adding an additional up-front incentive for projects located in overburdened communities to help defray the initial cost of installation.

The Straw Proposal seeks comment on how to structure any adder, as well as how much an adder should be.[24] Staff also seeks comment on which option will best promote adoption of energy storage in overburdened communities.[25]

[23] *Id.* at 19.
[24] *Id.* at 20.
[25] *Id.*

The Straw Proposal does not recommend additional incentives to locate Grid Supply storage in overburdened communities since the performance-based incentive for Grid Supply prioritizes locating in areas with the highest carbon emissions. The Straw Proposal seeks comment on whether this price signal is sufficient to encourage the transition from peaking generation to energy storage. The Straw Proposal also requests comment on how best to address these interrelated issues.[26]

b. JCP&L Comments:

JCP&L supports the Straw Proposal's goals of incenting Distributed Resources to locate in overburdened communities. The Board should, however, be mindful of the impact that any additional or separate incentives may have on customer bills. JCP&L also agrees with the Straw Proposal's recommendation of not providing additional incentives for Grid Supply to locate in overburdened communities, as the performance-based incentive for Grid Supply already prioritizes locating in areas with the highest carbon emissions.

3. Term of Fixed Incentive:

a. Straw Proposal:

The Straw Proposal considers the contract length needed to ensure that the term of any award is sufficient to provide financing of winning projects, while minimizing the period over which ratepayers will support each energy storage resource.[27] The Straw Proposal suggests a contract length of between 10 and 15 years.[28]

b. JCP&L Comments:

The energy storage industry is changing rapidly, and JCP&L is concerned that a 10-15-year contract length would mean that customers would be burdened with contract obligations that may exceed the asset lives of some of the energy storage devices participating in the NJ SIP. Therefore, a defined duration period of no greater than 10 years for Grid Supply contracts would be more appropriate to account for the efficiencies created by evolving technology. Contracts for Distributed Resources should be less than 10 years and perhaps structured differently, *e.g.*, one-year contracts with renewal potential by the BPU after consultation with the operating EDC. This is consistent with the Straw Proposal's rationale that "shorter contractual terms create more opportunity for innovation and turn-over of projects, minimizing the risk of technological obsolescence and requiring ratepayer support for a shorter period of time."[29]

[26] *Id.* at 20.
[27] *Id.*
[28] *Id.* at 21.
[29] *Id.* at 20-21.

In sum, the contract duration needs to be structured to ensure that customers are only paying for energy storage resources that are actually available, in use, and providing a benefit. Similarly, it is essential that Board policies support full and timely cost recovery for EDC programs, investments related to energy storage, and costs resulting from the implementation of the NJ SIP.

4. Performance Metrics:

a. Straw Proposal:

The Straw Proposal seeks to make the fixed incentive payment contingent on a storage resource remaining online and available for dispatch in 95% percent of all hours. It further recommends that the Board utilize the PJM Equivalent Forced Outage Rate ("EFORd") as the metric for Grid Supply projects. The Straw Proposal provides that energy storage resources that fail to meet the EFORd requirement would have their fixed incentive level decreased by the percentage of the unavailability, *e.g.*, Adjusted Payment = (Fixed Payment)*(1-EFORd). The Straw Proposal states that "availability" is not whether a resource is dispatched, but whether the resource is placing economic bids into the PJM market. It seeks comment on whether an availability level of less than a certain percentage (initially proposed at 50% availability over a rolling 12-month period) should result in the project being investigated and potentially terminated from the program.[30]

The Straw Proposal also seeks comment on how best to incorporate a similar performance requirement for Distributed Resources and whether there should be a size limit. It asks whether to exempt all Distributed Resources from this availability requirement, due to their smaller size and the need to limit program complexity.[31]

b. JCP&L Comments:

JCP&L agrees that a performance metric for both Grid Supply and Distributed Resources is needed, and that 95% availability is appropriate for both. In addition, a penalty beyond reduced performance incentive payments should be incorporated for energy storage devices that do not perform according to program protocol.

Performance metrics for Grid Supply resources need to consider PJM market rules, requirements, and operations to ensure that they can satisfy their obligations as a participant in both the NJ SIP and the PJM Markets. This includes: (i) considering their individual need to charge; and (ii) balancing when charging complies with the goals of the NJ SIP against when it is most advantageous to participate in PJM.

Performance metrics for Distributed Resources should also be required regardless of resource size, as they will be called upon to achieve the load management objectives or program criteria determined by the EDC. In order to capture the benefits of Distributed Resources, there

[30] *Id.* at 21.
[31] *Id.*

should be a similar availability requirement to that of Grid Supply. To derive the anticipated benefits from Distributed Resources, the EDC must be able to reliably control and operate these devices when needed to achieve program objectives and prevent additional or duplicate efforts with other devices or equipment. Since these will be privately owned storage devices, it will be important to recognize the configuration and use cases of the individual energy storage resources to make sure they can achieve the desired program results. Moreover, the NJ SIP program protocol needs to consider that many of these devices are being installed for customer resiliency efforts that need to remain a priority.

In order to facilitate this level of control and visibility into the distribution grid, significant time and investment will be needed by the EDCs to maintain reliability and develop automated call systems. Due to the highly technical nature and variability from one EDC to another, JCP&L strongly recommends that, prior to adopting any reforms contemplated within this section of the Straw Proposal, Staff should convene a series of workshops and/or technical conferences to discuss what will be required (*e.g.*, IT, staffing, costs, and timing considerations) and to discern the best path forward to achieve the objectives of the NJ SIP without overburdening customers or impeding reliability. JCP&L asserts that there should also be a new comment period following the workshops to provide additional feedback prior to the adoption of any of these proposed reforms.

D. Performance-Based Incentives:

1. Grid Supply:

A. Straw Proposal:

The Straw Proposal recommends that the Board hire a Program Administrator to track and administer the performance-based incentive portion of the NJ SIP based on PJM's marginal carbon emissions data.[32] The Straw Proposal asserts that this approach will allow the NJ SIP to reward Grid Supply resources that result in lower marginal grid emissions, while reducing payments to energy storage resources that increase emissions or do not lower emissions sufficiently. To determine the incentive rate, the Straw Proposal recommends that the Program Administrator work with stakeholders to develop the specific calculation. The Straw Proposal envisions that energy storage devices will be required to track the marginal emissions rate at the time the device is discharging (in pounds of CO2-equivalents/MWh) minus the marginal emissions rate at the time the resource is charging. The Straw Proposal suggests allowing resources to over-perform as well as under-perform, up to 200% of their benchmark.[33]

The Straw Proposal seeks comment on how this would work but initially proposes a target benchmark of 10 pounds of CO2-e abated per kWh of storage capacity, roughly comparable to California's requirement of 5 kg of CO2-e abated per kWh of storage capacity. The Straw Proposal also seeks comment on whether the performance-based incentive should establish specific "performance hours" to ensure that storage devices are targeting operations to peak-load

[32] *Id.* at 23.
[33] *Id.* at 24.

conditions within PJM.[34] The Straw Proposal asks whether it is appropriate to adjust performance hours in future years and whether future adjustments to performance hours can be accomplished while still providing sufficient certainty for developers to commit the necessary capital and receive financing. It also asks how to treat storage resources charging directly from a co-located power source and how to impute a specific emissions rate in such a situation. Finally, the Straw Proposal requests comment on whether this or another metric would be preferable.[35]

B. JCP&L Comments:

JCP&L agrees that utilities should not be responsible for administering the NJ SIP and that a Program Administrator should be utilized to track and administer the performance incentives for all Grid Supply. This approach has been successful in the Successor Solar Incentive Program, which has utilized a Program Administrator to facilitate execution of the Transition Renewable Energy Certificates and ADI programs. It should be the Program Administrator's role to obtain, track, and analyze the data needed to evaluate the participation and performance of each Grid Supply resource to ensure that their discharge and charging occurs in a manner that lowers marginal grid emissions consistent with the NJ SIP requirements. The Program Administrator should be the single point of contact for the EDCs and PJM. JCP&L asserts that the EDCs should have minimal involvement in this process and asks that the Board clarify any role that it anticipates being the EDCs' responsibility.

The performance hours of the Distributed Resources program should be flexible based on the specific system needs of each EDC. While managing summer peak load conditions is a good first step in program design, the program needs to consider the customer's intended purpose of the installed device and related limitations. Additionally, not all storage devices will be needed to provide summer peak load reductions – some may be used to store energy during summer peak solar export conditions, which may also occur during summer peak load conditions. JCP&L fully expects system load conditions to change as electrification of vehicles, building space, and water heating progress, which will cause the need for changes in the program operation for these storage devices.

Grid Supply resources should not be allowed to perform up to 200% above benchmark. In order to properly manage the electrical grid and interconnections processes, JCP&L needs to know the amount of performance related to benchmark, plus the time that the unit will be called up for service (load or supply). It is also important for managing program costs and bill impacts to customers. JCP&L suggests that the proposed 200% above benchmark threshold for over performance should be reduced to 110%, with prior approval by the EDCs, for Distributed Resources. Gross over performance is also not recognized in the PJM Markets unless specifically called upon by PJM for contingency purposes.

[34] *Id.*
[35] *Id.* at 25.

2. Distributed Generation Performance Incentive:

The Straw Proposal recommends directing each EDC to establish a performance-based incentive, in $/kWh, that would be provided to storage resources operating during specific call hours.[36] In its filing, each EDC will be required to address: (1) program call hours, (2) a $/kWh Incentive payment for calls; (3) payments to resource owners; and (4) a mechanism for calling on resources.

A. Program Call Hours:

i. Straw Proposal:

Under the Straw Proposal, each EDC will identify the seasons and times of day when deployment of storage resources is most likely. The Straw Proposal suggests that the call hours would focus on summer peak hours, between 3 pm – 7 pm on weekdays; however, each EDC will have the flexibility to determine the season and preferred hours.[37]

ii. JCP&L Comments:

There should be significant flexibility for each EDC to establish program call hours. Due to increasing electrification and shifts in load, there needs to be a simple and straightforward protocol for the EDCs to adjust program call hours for NJ SIP participants. The Company agrees that, traditionally, electricity usage peaks in the summer; however, with increasing electrification, PJM anticipates a shift to winter peaking.[38] JCP&L is concerned that focusing on summer peak hours may help reduce peak demand at the cost of dissuading energy storage resources from providing other services, such as hosting capacity and resiliency. It also fails to account for the unique customer load make-up in different areas, which may peak at different times. For example, a predominately residential load, or some commercial/industrial load areas may actually peak on weekends.

c. A $/kWh Incentive Payment for Calls:

i. Straw Proposal:

The Straw Proposal suggests that each EDC adopt a $/kWh payment for storage resources. The Straw Proposal allows for EDCs to either adopt a single-system payment or establish geographically variable payments, if warranted. The Straw Proposal provides that rate and tariff design should align with expected PJM rules related to Federal Energy Regulatory Commission

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[36] *Id.*
[37] *Id.*
[38] https://www.utilitydive.com/news/pjm-power-plants-blackout-risks-transition-report/624031/; and https://www.pjm.com/-/media/library/reports-notices/special-reports/2022/20220517-energy-transition-in-pjm-emerging-characteristics-of-a-decarbonizing-grid-white-paper-final.ashx.

("FERC") Order No. 2222[39] and include co-optimizing economic and GHG reduction considerations. The Straw Proposal states that each EDC should explain how its proposed payment structure meets the following criteria: (i) maximizes environmental benefits of storage deployment; (ii) minimizes distribution investment; and (iii) otherwise minimizes the stress on the local distribution system and reduce operating costs.[40]

ii. JCP&L Comments:

The Company agrees with the Straw Proposal that the rate and tariff design should align with FERC Order No. 2222 and the pending PJM Compliance Filing.[41] Specifically, FERC Order No. 2222 requires Regional Transmission Organizations ("RTO") to revise their tariffs to: "(1) allow distributed energy resources that participate in one or more retail programs to participate in its wholesale markets; (2) allow distributed energy resources to provide multiple wholesale services; and (3) include any appropriate restrictions on the distributed energy resources' participation in RTO/ISO markets through distributed energy resource aggregations, if narrowly designed to avoid counting more than once the services provided by distributed energy resources in RTO/ISO markets."[42] FERC Order No. 2222 further requires RTOs to demonstrate in their compliance filings how they will account for the different services that distributed energy resources provide in the RTO markets.[43] In FERC Order No. 2222, FERC found that is "appropriate for RTOs/ISOs to place narrowly designed restrictions on the RTO/ISO market participation of distributed energy resources through aggregations, if necessary to prevent double counting of services."[44] To Comply with FERC Order No. 2222's double-counting provisions, PJM has proposed to "properly account for the different services that Component DER will provide in its markets through the registration process, verifying any retail or existing wholesale activities for the Component DER and restricting wholesale participation under the DER Aggregator Participation Model where needed."[45]

FERC Order No. 2222 is still an active proceeding and the implementation efforts with PJM are ongoing with PJM's targeted implementation date of February 2, 2026 (which has not yet been approved by FERC). Close coordination via targeted workshops and meetings is essential between the EDCs, Staff, and PJM to ensure that implementation of this portion of the NJ SIP does not conflict with or violate the objectives of FERC Order No. 2222.

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[39] *Participation of Distributed Energy Resource Aggregations in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Final Rule, 172 FERC ¶ 61,247, at P 147 (2020) ("FERC Order No. 2222").
[40] Straw at 25.
[41] *Order No. 2222 Compliance Filing of PJM Interconnection, L.L.C. Motion for Extended Comment Period*, Docket No. ER22-962-000 (February 1, 2022) ("PJM Compliance Filing").
[42] *Id.* P 160.
[43] *Id.*
[44] *Id.* P 161.
[45] PJM Compliance Filing at 9.

Additionally, Staff should be mindful when considering payment eligibility from other EDC Energy Efficiency and Peak Demand programs made to these Distributed Resources. While revenue stacking may be appealing, ultimately customers paying for the programs will see bill increases that need to be considered if multiple revenues streams are permitted.

JCP&L does not have a strong preference regarding a single payment verses geographically variable payment structure. However, great care must be taken to define geographic regions and pricing structures to properly incentivize investment in a particular region. Since such a 'market' construct can take years to design and even longer to mature, it may be in the best interest of the State's goals to begin with a single payment structure and further explore a variable payment structure through focused workshops.

Finally, the three criteria referenced in the Straw Proposal, *e.g.*, (i) maximizing environmental benefits of storage deployment; (ii) minimizing distribution investment; and (iii) minimizing stress on the local distribution system and reducing operating costs, are in their own rights uniquely complicated, especially when looking to engineer expected outcomes. When implementing solutions, it is entirely possible one criterion may have to be sacrificed entirely to meet another. For example, in order to facilitate action to reduce environmental concerns, investment in the distribution system may be required beyond a 'minimized investment;' however, the net overall cost/benefit may still be positive. In other words, to get to a net overall positive outcome it may be that some costs go up while others go down. JCP&L encourages Staff to address these issues with program values trade-offs in a series of workshops.

d. Payments to Resource Owners:

i. Straw Proposal:

The Straw Proposal recommends that during dispatch events, a Distributed Resource owner will meet its performance-based payment obligation if it responds to a call. Responding to a call can mean either injecting energy into the distribution system or reducing the customer's consumption of power from the grid (collectively, these are the distributed customer's "Response kWhs," measured in kWhs of relief provided). Under the Straw Proposal, when an EDC sends a dispatch signal, the customer would receive credit for each kWh of Response kWhs it provides during the call period, averaged over all call periods in a year. A Distributed Resource owner would receive the $/kWh incentive established by the EDC, multiplied by their average Response kWhs. As recommended in the Straw Proposal, the only penalty for non-responsive resources is that the resource's average Response kWhs would decrease and the resource owner would receive a lower pay-for-performance payment. The Straw Proposal states that "At no point would the Distributed storage resource incur penalties or result in a decrease to the fixed payment."[46]

[46] Straw at 26.

ii. JCP&L Comments:

The Straw Proposal suggests that Distributed Resources only receive a decreased incentive payment for non-responsiveness. JCP&L asks that Staff clarify its statement that "[a]t no point would the Distributed Storage Resource incur penalties or result in a decrease to the fixed payment" in conjunction with establishing the performance metrics. The loss of potential event-based performance payments alone will not be sufficient to support EDC program efforts, especially if these programs will ultimately be utilized by the EDCs to meet reliability objectives or other program performance standards established by the Board. Consideration should be given to developing performance matrix criteria for these devices that requires them to achieve a minimum level of performance when called upon by the EDCs or risk receiving penalties and/or the loss of the contract with the EDC. JCP&L asks that Staff convene workshops to discuss non-responsiveness and penalties.

As discussed in the below comments regarding "A Mechanism for Calling Resources," it is imperative that the Board consider implementing training and/or certification requirements for Distributed Resource owners to ensure that they fully understand the programs that they are participating in and the obligations they are accepting. It is also essential for any Distributed Resources that are participating in multiple programs to understand their obligations under each program and how to assess and respond to those competing obligations.

e. A Mechanism for Calling Resources:

i. Straw Proposal:

Under the Straw Proposal, each EDC will be required to develop a system for calling resources and communicating with Distributed Resources, many of which are expected to respond automatically. The Straw Proposal allows customers the ability to opt-out of a particular call, without penalty (apart from foregoing performance incentives they could earn during that call). The Straw Proposal further provides that each EDC should rely, to the maximum extent possible, on Advanced Metering Infrastructure ("AMI").[47]

ii. JCP&L Comments:

Under the Straw Proposal, Distributed Resources would be compensated to respond to market signals for both exporting energy and creating load that may not be aligned with the EDC's reliability efforts for the distribution grid, a customer's immediate energy needs, or environmental response signals. In fact, their unmanaged or unpredictable charge-discharge characteristic means that if Distributed Resources are not solely dispatched by the EDC for reliability, they could adversely impact the reliability of the distribution grid. To ensure that Distributed Resources do not reduce reliability and significantly increase costs for customers, an EDC operator must have visibility, dispatch control, and real-time distribution operational analysis capability for Distributed Resources on its distribution grid. If the EDC does not have this level of control, it

[47] *Id.*

must plan and build its system to meet the gross load connected. For example, before Distributed Resources were increasing in utilization, wires were sized to meet load from centralized generation. The grid was planned, built, and operated to deliver energy efficiently over wires sized to serve gross load plus modest growth. Due to Distributed Resource proliferation, views have emerged that indicate engineers no longer need to worry about the size of the wire and instead can 'rely' on energy production that is sited at the end of the line. This leaves engineers in a reliability design lurch. Does the engineer design the wires system to not rely on the Distributed Resources if they are not singularly focused on distribution reliability? Or does the engineer design a wires system that allows for unfettered use, as headroom disappears with more Distributed Resources interconnecting?

To accomplish the unfettered use scenario, and a landscape akin to what Distributed Resources are currently accustomed to, there may need to be upgrades, *e.g.*, larger wires, additional equipment, etc., to maintain balance and avoid service interruptions if Distributed Resources do not respond. In other words, rather than reducing costs and increasing reliability by mitigating system contingencies for customers, the addition of Distributed Resources could increase costs by requiring the EDCs to build the distribution grid to accommodate the maximum generation and load that the charge-discharge nature of a Distributed Resource may create in pursuit of various value stacking capabilities.

Currently, the Company does not maintain the staffing, near real-time system modeling, or IT processes that are required for the type of automated call system that is contemplated in the Straw Proposal for Distributed Resources. In order for JCP&L to facilitate this type of automated process, operations will need to evolve to a system where, similar to PJM, the Company is able to model and stack Distributed Resources based on location and the services that they are able to provide. JCP&L will then need to develop a process that can automatically call on Distributed Resources and then, when one resource does not respond to a call, automatically determine the next resource that may be able to provide that service until an appropriate and responsive resource is dispatched.

As the Board is aware, JCP&L's AMI Plan includes targeted installation of devices between March 2023 and December 31, 2025. While AMI will provide connectivity to customer locations, it may not provide the needed bandwidth and speed required for the level of automated dispatch. Furthermore, the Company is not aware of any devices that exists in the marketplace today that perform the proposed functions and are compatible with the planned AMI network technology being rolled-out by the Company. Moreover, JCP&L notes that most customers are eligible to opt out of participating in AMI, which may provide holes in the Company's visibility. Thus, a significant investment, design, and build out of existing systems will be required to comply with the automated call proposal. In addition, JCP&L does not have experience with calling generation resources onto the distribution system, which would require the creation and implementation of additional training for engineers and operations staff.

It is imperative that the Board convene workshops to discuss expectations for and compliance with its automated dispatch recommendation. JCP&L further asks that the Board institute an additional round of comments following any workshops prior to requiring automated

dispatch. These workshops should also consider compliance and alignment with FERC Order No. 2222.

Finally, while the Straw Proposal has focused on program design goals, there has been little mention of the additive costs and burdens on the EDCs. Once the technical expectations and requirements are fleshed out in workshops and/or technical conferences, the Board should make clear that the EDCs shall receive full and timely recovery of costs, through a rider clause, to develop, implement, and administer their obligations under the NJ SIP. The EDCs should have the opportunity to comment on the proposed recovery at that time.

JCP&L asserts that a deep understanding and balance must be struck between those operating energy management control paradigms and Distributed Resource owners to ensure that all parties understand their obligations, including the level of monitoring and control exercised over end use customer device(s). It is expected that customer education will become paramount to facilitate and engage the use of Distributed Resources so that customers are not caught unaware of responsibilities they have agreed to under program contracts. Therefore, JCP&L recommends that, to ensure maximum contributions from Distributed Resources can be realized, the Board should consider establishing trainings to ensure that Distributed Resource owners fully understand the programs in which they have agreed to participate.

E. Project Maturity Requirements Geographic Limitations, and Participation Fees:

a. Project Maturity Requirements:

i. Straw Proposal:

The Straw Proposal requires projects to meet one of the following criteria at the time they reserve MW capacity in a block: (i) demonstrate a sufficiently advanced position in the PJM queue (taking into account the realities of the ongoing PJM interconnection reform process); (ii) demonstrate a comparable interconnection position in a state-jurisdictional queue; or (iii) for net metered projects, demonstrate conditional approval of their utility interconnection request.[48] Energy storage projects would pay a non-refundable solicitation participation fee of $1,000 per MW of nameplate capacity.[49] For projects not interconnecting via the PJM interconnection process, the Straw Proposal recommends that these projects be required to provide evidence of having filed an interconnection application with the applicable EDC and having received Part 1 Approval, as defined in N.J.A.C. § 14:8-5.[50] The Straw Proposal notes that it is not possible to finalize queue position requirements for projects submitted under the new queue rules until the outcome of the PJM queue reform process is known.

[48] *Id.* at 27.
[49] *Id.*
[50] *Id.*

For Grid Supply projects, the Straw Proposal recommends using queue position.[51] It notes that if PJM's queue reform is adopted, it is likely that projects not already in the PJM queue will be unable to demonstrate any queue position until 2026 and not achieve commercial operation until at least 2028.[52] For net metered projects, the Straw Proposal suggests requiring a signed letter of intent with the host location and that projects have Part 1 Interconnection Application executed.[53]

ii. JCP&L Comments:

JCP&L notes that on June 14, 2022, PJM filed with FERC its proposed *Tariff Revisions for Interconnection Process Reform*.[54] On June 16, 2022, FERC issued *Improvements to Generator Interconnection Procedures and Agreements*.[55] On November 29, 2022, FERC approved the PJM Interconnection Filing subject to the condition that PJM submit two compliance filings.[56] In the IC Filing, PJM estimates that the new interconnection process will start with AG-2 Queue in June 2025.[57] Under the recently approved IC Filing, the study process could take up to two years before a Generator Interconnection Agreement ("GIA") is executed for a project in the queue and before PJM starts a new queue.[58] The Company asserts that this may inhibit energy storage projects and delay their ability to interconnect to the grid via the PJM process.

As the Board is aware, energy storage is not currently a renewable energy resource authorized for net metering under the Board's regulations or applicable New Jersey law. Therefore, any energy storage participation may require modification to New Jersey law and regulations, as well as changes to each EDC's net energy metering tariff.

Finally, great care should be taken to not corrupt the energy accounting equation, which balances energy supply and demand, when providing incentives to energy storage resources. Energy storage resources should be limited to being accounted for on either the supply side or the demand side of the equation, never both. This means that an energy storage resource that is supplying energy behind its retail meter on the supply side of the equation to serve load not located behind its meter, should not be able to use that same energy to net its load to zero on the demand side of the equation.

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[51] *Id.* at 27-28.
[52] *Id.* at 28.
[53] *Id.*
[54] Docket No. ER22-2110-000 ("IC Filing").
[55] 179 FERC ¶ 61,194 (2022) ("IC NOPR").
[56] *See Order Accepting Tariff Revisions Subject to Conditions re PJM Interconnection, L.L.C*, 181 FERC ¶ 61,162 (2022) ("PJM IC Order").
[57] IC Filing, Docket No. ER22-2110-000 at PP 30-33.
[58] *Id.* at Attachment D, P 33; *PJM IC Order*, 181 FERC ¶ 61,162 at PP 60-69.

b. Bid Fees:

a. Straw Proposal:

The Straw Proposal recommends a non-refundable $1,000 per MW fee to ensure the seriousness of bidders, incentivize bidders to follow through on project commitments, and help to defray the cost of administering state incentive programs.[59] Projects serving public entities would be exempt from the bid fee.[60]

b. JCP&L Comments:

The Company supports the Straw Proposal's non-refundable solicitation participation fee of $1,000 per MW that is modeled on the bid fee currently proposed for the CSI program. The Company further supports exempting energy storage projects that serve public entities from this fee.

F. Commercial Operation Date Requirements:

a. Straw Proposal:

The Straw Proposal recommends Commercial Operation Date ("COD") requirements to establish the length of time between when a storage developer reserves a MW quantity in a block and when the unit must be in commercial operation. The Straw Proposal provides that achieving commercial operation means that the project must be fully constructed, and must have completed the full interconnection process, either at PJM or with a state jurisdictional EDC, including construction of any required interconnection upgrades.[61]

For Grid Supply, the Straw Proposal recommends requiring that they reach commercial operation within three years. However, it recommends allowing any project that may not reach the NJ SIP's COD to renew its project back into the NJ SIP. Under these circumstances, projects exercising the option to renew would receive the lower of their initial registration price or the block price at the time that they renew their registration. This would allow the project to receive up to an additional three years to come online, while reflecting the market value when the project enters service.[62]

For Distributed Resources, the Straw Proposal recommends that they receive 18 months to reach commercial operation. It further recommends allowing projects to roll-forward their registrations, should they not meet the 18-month in service date requirement, at the lower of their initial registration price or the currently open block price.[63]

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[59] Straw at 28-29.
[60] *Id.* at 29.
[61] *Id.*
[62] *Id.* at 30.
[63] *Id.*

b. JCP&L Comments:

JCP&L supports the COD criteria proposed in the Straw Proposal. It is imperative that the Board require that the energy storage resources are interconnected to the distribution system such that they do not interfere with an EDC's ability to provide safe and reliable service to its customers. Each EDC will need to institute separate interconnection and participation agreements because each EDC's distribution grid infrastructure is unique and, therefore, the native EDC is in the best position to determine the appropriate standards to protect its system safety and integrity.

For an energy storage project to be fully commercially viable, the energy storage project must have been studied for the type of operation it has requested to be interconnected for and must have an interconnection/construction agreement executed where all the necessary utility upgrades have been identified and subsequently constructed, and the customers facility approved by the EDC. Moreover, adherence to standards, *e.g.*, IEEE1547-2018, by energy storage resources will be necessary such that EDCs have the ability to study each interconnection application, understand device operations, and evaluate the interconnections considering any potential benefits and impacts that may adversely affect the safety and reliability of the distribution system. In addition, before a project is commercially viable, market rights need to be in place for energy taken from or pushed into the distribution grid for settlement purposes.

JCP&L notes that this approach is consistent with both FERC Order No. 2222 and the PJM Compliance Filing.[64] In the PJM Compliance Filing, PJM defers oversight of the component DER participating in an Aggregation to the respective Relevant Electric Retail Regulatory Authority ("RERRA") (*i.e.*, the BPU) and requires that any component DER participating in an Aggregation have an approved interconnection agreement by the applicable electric distribution utility.[65]

G. Technical Requirements:

a. Straw Proposal:

The Straw Proposal suggests that in order to be eligible to apply for incentives, both Grid Supply and Distributed Resource projects must meet the following criteria:

- The energy storage system must be comprised of new products, electrically interconnected to the transmission or distribution system of a New Jersey EDC;
- Meet the requirements of IEEE Std 1547-2018, as amended or revised.
- Bulk storage devices must be qualified to provide energy, capacity, and/or ancillary services in the wholesale markets established by PJM, while resources at the distribution level may either sell aggregated output into PJM or participate in a distribution level incentive program;

[64] *See* Order No. 2222*,* 172 FERC ¶ 61,247; *PJM Compliance Filing,* Docket No. ER22-962-000.
[65] *PJM Compliance Filing,* Docket No. ER22-962-000 at 63-72.

- Meet the COD requirements, as demonstrated by submitting as-built drawings and confirmation of Permission to Operate from the relevant utility to the Program Administrator;
- Meet appropriate financial security and project maturity requirements;
- Meet minimum safety requirements by a Nationally Recognized Testing Laboratory as evidenced by specific UL listings defined in the program manual at the time the system enters commercial operation; and
- Comply with all manufacturers' and NFPA66 installation requirements, applicable laws, regulations, codes, licensing, and permit requirements.[66]

b. JCP&L Comments:

JCP&L supports the proposed technical criteria and believes that the requirements are appropriate for both Grid Supply and Distributed Resources.

H. Administration of the Program and Assignment Block Priority Dates:

a. Straw Proposal:

The Straw Proposal recommends that block allocations be established on a first-come, first-served basis, based on the date stamp of when the Program Administrator receives a completed application. Projects will be required to meet all of the maturity, fee, and other requirements discussed below in order to be deemed complete. The Straw Proposal further recommends that applications will be deemed "complete" if the application is approved as submitted or with a minor deficiency, as determined by the Program Administrator. Applications with major deficiencies will be assigned the block priority date on which the deficiency is cured.[67]

b. JCP&L Comments:

The Company agrees with the Straw Proposal that block allocations be established on a first-come, first-served methodology. JCP&L further agrees that the proposed maturity requirements are sufficient to appropriately limit risk associated with block allocations. In order to limit potential disputes, it would be helpful for the Board to clarify what constitutes a major versus minor deficiency.

[66] Straw at 30-31.
[67] *Id.* at 31.

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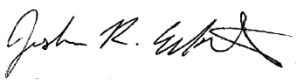
JCP&L again thanks the Board for the opportunity to provide these comments. If you have any questions, please do not hesitate to contact me.

Very truly yours,



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