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From: AES Clean Energy  
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To: New Jersey Board of Public Utilities  
Acting Secretary of the Board  
44 South Clinton Ave., 1st Floor  
Trenton, NJ 08625  
*Submitted electronically*

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

AES Clean Energy (“AES”) appreciates the opportunity to submit the following comments on the NJ BPU (“The Board”) Staff’s New Jersey Storage Incentive Program (SIP) Straw Proposal. AES commends the BPU for recognizing the important role of storage in ensuring a reliable electric grid and enabling the transition to clean energy for all communities in New Jersey.

## **I. Introduction**

AES was founded in 1981 and is a U.S.-based Fortune 500 global energy company with headquarters in Arlington, Virginia and offices in many locations in the U.S., including New York City. AES owns and operates a portfolio of more than 4.4 GW of renewable energy projects including more than 400 utility-scale and community solar, wind, energy storage and hybrid projects across 21 states. AES values the opportunity to demonstrate the importance of energy storage in meeting reliability and climate goals for New Jersey.

## **II. Fixed Incentive – Grid Supply Program**

At this point in time, it is difficult to answer the question of whether the proposed starting fixed-incentive rate of \$20/kWh is adequate for grid supply projects. Without certainty about what the performance-based incentive will be, it is hard to determine whether the proposed amount will be adequate to fill in the “missing money.” Understanding that the BPU must be conscious of how taxpayer dollars are spent, a better upfront incentive might be one that is indexed to the price of lithium. Lithium costs are driving the cancelation of storage projects across the country that developers can no longer afford to build. In order to keep within the bounds of the cost cap, the indexed incentive could include a ceiling. This would be a departure from what has been outlined in the Straw Proposal, but AES believes that the BPU should seriously consider this more targeted fixed incentive.

Whichever fixed incentive the Board chooses to pursue, AES advocates for a term of 15 years as this will be better for financing. Ease of financing is key to the successful deployment of storage. Better financing will shrink the amount of “missing money” needed to incentivize projects and will allow the state to set lower fixed incentive rates, saving the public money while aiding in the deployment of additional storage resources. The Board has requested feedback on how to balance the public purse while incentivizing as many storage projects as possible. AES believes that the best way to achieve this is to: 1. incentivize private money to come in (through stable, predictable cash flows) and 2. give just enough to make that happen, and nothing more. This requires the BPU to let the asset make as much as possible in pre-existing markets. If asset can make \$10 in market but needs \$15, then the state pays \$5. If the new incentive structure causes the asset to make \$9 in the market (for example by changing the dispatch optimization to optimize for carbon emissions rather than for LMP), then state now needs to pay \$6.

AES is generally supportive of making fixed incentive payments available to storage resources contingent on their performance. However, we do not believe that the PJM EFORD is the best metric to use for Grid Supply projects. We suggest that the BPU either use pure availability or select an availability metric that is tied more to the performance-based incentive. For example, LMP-weighted availability.

While AES is supportive of 50% availability over a 12-month period triggering an investigation into terminating the project from the program, we would like to note that we do not believe it is necessary for the BPU to create this requirement as part of the program. Any front-of-the-meter storage project participating in the SIP will need to be value-stacking the SIP with PJM capacity and energy arbitrage revenues. For those resources which offer capacity in PJM, there is must-offer obligation. So, the BPU could simply require front-of-the-meter storage to participate in PJM's capacity market, then rely on PJM to enforce market participation. This would reduce administrative compliance burden for NJ BPU and storage developers.

### **III. Performance Incentive – Grid Supply Program**

While AES is generally supportive of utilizing storage to decrease carbon emissions, we don't believe that using the PJM marginal carbon emissions data will create the correct market signals for two reasons. First, for projects to be built, they must be financeable. Although PJM publishes historical marginal emissions data, they do not publish future projections of marginal emissions data. Without an agreed upon forecast, it will be difficult, if not impossible, to secure financing and 3rd party contracts for these storage assets. Second, grid-connected storage assets in PJM are currently dispatched based on low-cost marginal pricing dispatch, as mentioned during the stakeholder workshop. Storage resources cannot be optimized to dispatch on two different market signals (LMP and marginal carbon emissions), so we urge the BPU to consider a different method of incentivizing grid-supply storage to reduce GHG emissions. We recognize that one of the goals of the storage program is to use energy storage to decrease greenhouse gas emissions, but we believe that using this price signal will be counterproductive to this goal by preventing any projects from being built.

AES does not advise that the BPU established specific hours of discharging in each season for the performance-based incentive program. To begin, the schedule would likely not match actual grid emissions since it would be a rough estimation of when emissions are highest. Realistically the hours each day where grid emissions are highest would be constantly changing based on weather events, load, etc. so there is no guarantee that storage systems would be discharging during

the dirtiest hours of the grid. Additionally, limiting the hours that the storage system can operate does not allow the system to dispatch optimally. If the systems are not able to dispatch optimizing for economics, then the incentive levels would need to increase for projects to be built. Allowing the systems to operate more freely will help keep program costs lower for the state.

While AES is supportive of pairing storage resource with Class 1 resources, we would like to note that this contradicts the BPU's stated goal of incentivizing standalone storage. If the hours that a storage resource charges from a Class 1 renewable resource are reflected as charging with a marginal emissions rate of zero, this creates a favorable environment for storage resources that are co-located with solar or another renewable energy source. Paired storage resources will receive the pay-for-performance incentive any time they discharge (if they charge solely from the renewable resource) since the marginal emissions rate at charge is guaranteed to be zero. In contrast, a standalone storage resource would have more difficulty predicting their pay-for-performance incentive and therefore face additional uncertainty. This seems counterproductive to the stated goals of the proposed Storage Incentive Program.

We urge the BPU to consider the following when referring to programs in other states to inform the design of the SIP. The CA SGIP program is not the primary driver for large-scale grid connected storage deployment in California. That program is primarily used for smaller, distributed storage projects. Instead, large-scale deployment in California is driven by Integrated Resource Procurement mandates. Most recently, in June 2021, California Public Utilities Commission (CPUC) issued a decision as part of the mid-term reliability needs of the electricity system within the California Independent System Operator's (CAISO's) operating system by requiring at least 11,500 megawatts (MW) of additional net qualifying capacity (NQC) to be procured by all the load-serving entities (LSEs) subject to the Commission's integrated resource planning (IRP) authority.<sup>1</sup> The capacity requirements are adopted annually, beginning with 3,000 MW by 2023, an additional 4,500 MW by 2024, 2,000 MW by 2025, and 2,000 MW by 2026. Mainly resources with no GHG emissions are eligible to participate in this IRP. Since Solar and Wind resources have low NQC, IOUs are incentivized to procure grid connect storage to meet these mandates. In addition to the legislative goal set by state lawmakers, the BPU should explore the possibility of a similar mandate requiring EDCs in the state to procure front-of-the-meter storage.

#### **IV. Project Maturity Requirements, Geographic Limitations, and Participation Fees**

AES is supportive of maturity thresholds for application to the SIP. We suggest, for grid-supply projects, that the BPU establish different maturity requirements depending on whether the project is grandfathered into the old PJM interconnection process, the transition process, or the new process recently approved by FERC. For projects grandfathered into the old interconnection process, GIA execution would be an appropriate milestone. For projects in the transition process or new process, a system impact study would be an appropriate milestone.

Since PJM interconnection costs are already quite high – if interconnection milestones are a maturity threshold for the application – it would be an unnecessary burden for developers who are interconnecting to the PJM grid to pay an additional fee. In the end, additional financial burden on projects will only result in the need for larger financial incentives from the state which will cost ratepayers more money.

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<sup>1</sup> <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M389/K603/389603637.PDF>

## V. Commercial Operation Date Requirements

AES believes that 3 years to reach COD is a reasonable amount of time for grid-scale projects if there are maturity requirements that require projects to be close to attaining a fully executed interconnection agreement. Given the new PJM study process, the NJ BPU should select an appropriate maturity milestone in the interconnection process so that only projects which are far along in the development process will be allowed to apply (AES has suggested a milestone above). We urge the BPU not to include the opportunity for a 3-year extension. Allowing an additional 3-year extension will only tie up the limited money available. The most cost-effective storage projects will be able to COD within the 3-year time frame given.

## VI. Administration of Program and Assignment of Block Priority Dates

AES supports larger block sizes in the early years of the program. The block sizes currently proposed by the BPU are on the smaller size, one or two projects could easily take all the year 1 capacity. In order to create a robust market for private storage development, block sizes in the early years should be large enough to support multiple projects.

Additionally, the Straw Proposal answers the question of what happens when a project spans multiple blocks but does not answer the question of if a project spans multiple blocks across energy years. For example, if a project would take up the remainder of block capacity for the 3rd block in EY2023/2024 and the 1st block in EY2024/2025, would the project need to wait until EY 2024/2025 to receive an award? Other state programs do not put yearly caps on how many blocks can be fulfilled, we recommend that the BPU consider this option as it would create less confusion and allow more projects to apply to the program in the earlier years.

## VII. Conclusion

AES commends the NJ BPU for its proposed *New Jersey Storage Incentive Program (SIP)*, which provides a comprehensive plan for an incentive program needed to achieve the goals of the statutory mandate to install 2,000 MW of energy storage by 2030. AES recognizes that balancing the interests of all stakeholders is a huge challenge, but a necessary one for a successful transition to renewable energy. AES appreciates the opportunity to offer its perspectives on the *Storage Incentive Program Straw Proposal* and welcomes further discussion with the BPU.

Respectfully submitted,

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