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NJBPU Energy Storage Team

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Re: The New Jersey Storage Incentive Program (NJ SIP)
2024 Straw Proposal and Draft Rules
Docket No. QO22080540
Response to November 20, 2024 Webinar questions

December 18, 2024

Dear Secretary Golden and the NJBPU Energy Storage Team,

Below are my suggestions and responses to the questions posed in the November 20, 2024 Webinar.

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

Response

Does PJM provide specific methane emissions from both fugitive [blowdowns, leaking, venting] and combustion?

In all of my research of natural gas facilities throughout the US, I have found that ever facility investigated grossly under reports methane emissions. I have raised this with EPA region 2 and NJDEP for facilities in New Jersey. EPA Region 2 required the facility I reported to restate their past 10 years. They had previously reported 1 ton of methane per year, then raised it to 50+ tons per year. The specifications of the facility indicate that it emits approximately 600 tons of methane each year.

My suggestion:

- We need performance incentives based on net avoided methane and carbon dioxide emissions. The challenge is verifying actual and projected reduction in emissions. But in the short term, incentives definitely based on calculated emissions.
- Work with NJDEP Air Emissions Compliance and Enforcement in terms of pushing PJM to provide greenhouse gas emissions, especially methane emissions. We cannot rely on any entity involved with the natural gas facilities infrastructure to provide accurate or even grossly close to accurate methane emissions.
- We need emissions fully accountable carbon dioxide and methane emissions separately. Once emissions are understood, then emissions reduction can be better measured and monitored and tied to the performance incentive. But we need to still move forward with the performance incentive.

2. In the absence of a day-ahead emissions signal, should the SIP institute another form of performance incentive for Grid Supply projects?

Response

NJBPU could consider using a calculation of percentage reduction from natural gas and other fossil fuel sources as another form of calculating performance incentives. This probably is a more clearer approach since emissions are an elusive measure.

3. What other changes or alternatives would you propose to the GHG Performance Incentive?

Response

An alternative is simply identifying grid sourced power from storage in contrast to grid sourced power from natural gas fired power plants.

4. How can the Board mitigate the risk of Grid Supply projects not operating/performing after receiving upfront incentives?
   a. Are the reporting requirements proposed herein sufficient?
   b. Should there be a clawback clause to recover fixed incentive payments from energy storage systems that cease operating shortly after coming online?
   c. What should be the metric of success for a specific project be (e.g., discharging power during peak demand periods) for Grid Supply energy storage systems? In other words, what metrics should the Board consider when evaluating operation?

Response

I echo the comment made by Cogentrix: "Cogentrix cautions the BPU against overcomplicating its process by evaluating run-time and failure-to-run as measures of success. "

NJBPU should implement an overall dashboard of metrics for the Energy Storage Incentive Program that is produced on a quarterly basis. From these metrics, it will highlight whether or not the program is increasing storage in New Jersey, the number of projects, the capacity rate of change and costs associated with the Program.

I am not sure that the Board has enough metrics or a dashboard to effectively evaluate operation. No such dashboard has not been presented in the Energy Storage Incentive Program. I would not make any restrictions until a dashboard is presentable to the public and provided on a quarterly basis.

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

Response

For Grid Supply, I would suggestion yes. However, the proposed storage could be another form of taking advantage of overburdened communities. This is a complicated question and with the current infrastructure and if distribution Energy Storage Solutions are being deployed, it might make this question immaterial.

This is part of the reason why I suggest that NJBPU first use utilities to enable residential and business installations of distribution Energy Storage Solutions.

6. The distributed incentive level breakdown provides varying incentive levels for different sized energy storage systems to account for cost differences. Are the proposed incentive levels appropriate?

Response

I would suggest that NJBPU consider aggressive incentives in the first two years and then backing off as distributed Energy Storage Solutions are implemented. If we use the utility companies as the mechanism instead of EDCs, the locations opportunity increases a thousandfold with many residents and businesses who are willing to install Energy Storage Solutions at their location.

We have 5 years left until 2030. This needs to be an aggressive fast-tracked Program managed by a Program Management Office to meet 2,000 MW and 8,000 MWhs by 2030.

7. Are the incentive adders for OBCs too high, too low, or should the proposed OBC incentive otherwise be modified?

Response

I am very saddened by the way low-income communities have been burdened by many different types of toxic industries. I follow the Newark Iron Bound Community fighting against 2 natural gas fired turbines that were already purchased for backup electricity for the PVSC (Passaic Valley Sewerage Commission). If NJBPU pushed the distributed Energy Storage Solutions with the serving utility, the distributed energy storage solutions could be controlled to serve PVSC in times of disaster to provide the 12,000 MWhs PVSC claims it requires for a 2-week outage.

It isn't okay to approve additional natural gas fired turbines in the lowest of income locations where they are already overburdened in terms of constant air contamination and soil contamination by many other toxic industries.

NJBPU has the opportunity to intervene on this challenge and work with the utility to create 20 local distribution Energy Storage Solutions with each having a minimum of 10 MWhs of storage.

8. How far along are the EDCs in implementing the technology needed to issue calls for the performance incentive portion of the SIP? Will this affect the design of the performance incentive?

Response

I have made a few calls and read a few comments from EDCs.

It is clear that New Jersey is in its infancy in terms of Energy Storage Solutions. I would consider what other states are doing, but be cautious in and monitor the overall trend. This is why I would recommend using the NJ utilities to initiate this program and gradually switch over to EDCs.

Tesla is now offering what they call their Megapack https://www.tesla.com/megapack/design. It costs $1,000,000 for once unit, which can provide up to 3.9 MWh of electricity per unit. GKN Hydrogen (https://www.gknhydrogen.com/product/) provides a metal hydride hydrogen electric solution which costs $200,000 per storage unit and provide up to 2 MWhs per unit. Both options claim a 15-year warranty. However, the hydrogen metal hydride can last for decades without any losses. Additionally, the GKN Hydrogen solution is 100% recyclable.

9. Should the Board require EDCs to implement a designated distributed energy resources management system (DERMS) to effectively manage and dispatch resources across their systems?

Response

I would think that this should be a yes. However, it should be managed and dispatched in a coordinated way only to EDC installations to a regional sub-plant. EDCs most likely try to install as many Energy Storage Solutions as possible across a region greater than a utility grid.

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

Response

I am reviewing S225/A4893. The original model for energy was using the fossil fuel invented monolithic supply system. With renewables and distributed Energy Storage Solutions, New Jersey will disrupt that monopolistic model and enable a holistic, resilient energy supply model that enables supply and consumption within each grid section from renewables and storage. I plan to provide comments on that bill so that it supports NJBPU Energy Storage Team and New Jersey in the push to transition to renewable energies.

Sincerely,

Kirk Frost