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February 12, 2021

Aida Camacho, Board Secretary
New Jersey Board of Public Utilities
44 South Clinton Avenue, 9th Floor
P.O. Box 350
Trenton, NJ 08625-0350

Re: I/M/O the Application of PSEG Nuclear LLC ("PSEG") for the Zero Emission Certificate Program – Hope Creek, and the Applications of PSEG and Exelon Generation Company LLC for the Zero Emission Certificate Program – Salem Units 1 and 2, BPU Docket Nos. ER20080559, ER20080557 and ER20080558

Written Comments of PSEG Nuclear LLC

Dear Ms. Camacho:

Pursuant to the Notice of Public Hearing dated January 15, 2021, please accept these written comments on behalf of PSEG Nuclear LLC ("PSEG") in the above-referenced matters, in which PSEG has submitted applications for Zero Emission Certificates ("ZECs") for the Salem 1, Salem 2, and Hope Creek nuclear plants. These written comments supplement PSEG's February 1, 2021 public hearing comments.

1. Nuclear Generation Is Critical to New Jersey's Clean Energy Strategy.

New Jersey has clearly recognized the need for nuclear generation in achieving its ambitious clean energy goals. In May 2018, the ZEC statute was passed to prevent the premature retirement of the nuclear generation that serves approximately 40% of the electricity needs and 90% of the carbon-free generation in New Jersey. The law recognized that preservation of this zero-emission generation is key to mitigating the impacts of climate change and to improving air quality in New Jersey. The need to preserve these nuclear plants also played prominently in New Jersey's *2019 Energy Master Plan Pathway to 2050* (the "Energy Master Plan") issued early last year. The Energy Master Plan identified the preservation of nuclear as one of its four broad initiatives. Furthermore, as detailed in the Integrated Energy Plan published by the Rocky Mountain Institute and Evolved Energy Research supporting the Energy Master Plan, New Jersey residents would pay billions more annually to achieve the state's clean energy goals if the plants were retired.[1]

The negative environmental effects of retiring these three nuclear plants would be significant. According to ERM's Greenhouse Gas Report submitted as part of PSEG's applications, retirement of the nuclear plants would result in increased greenhouse gas emissions,

[1] *See* https://nj.gov/emp/pdf/New_Jersey_2019_IEP_Technical_Appendix.pdf.

as well as other air pollutants that are precursors to ozone, as the lost electricity output would be offset almost exclusively by gas-fired and coal resources, jeopardizing the state's ability to achieve its 2050 greenhouse gas reduction goals and ozone concentration requirements.[2] This impact would fall particularly heavily upon urban areas and less affluent populations within the state.

In addition, PSEG's applications also demonstrate that the retirement of the plants would adversely affect the fuel diversity and resilience of the generation resources serving the state.[3] In contrast with gas-fired units, nuclear generation has a large store of on-site fuel, and nuclear plants are more resilient to cyber or physical attacks than other resource types. The loss of New Jersey's nuclear plants therefore would expose the state to additional fuel security risks and risks of other types of disruptions.

2. Extending The Current ZEC Keeps Costs Down For New Jersey Residents.

By extending the current ZEC for this three-year period, the Board will not be increasing the costs of electricity for New Jersey customers, but will in fact be keeping costs lower than if the plants were to retire prematurely. A recent study by Brattle concludes that the premature retirement of these three nuclear plants would have a negative annual economic impact of $1.2 billion, including the loss of thousands of well-paying jobs, which would have a significant impact on the local economy in Salem County and the economy of New Jersey. Moreover, the continuation of the existing ZECs for these three plants is significantly less expensive for New Jersey customers than other current options employed by the state to meet its clean energy goals. Specifically, the renewable energy credits for solar generation exceed $200, and offshore wind credits are about $46 according to the Board, placing solar credits at 20 times the cost of the current ZECs, and wind at 4 times the cost of the current ZECs.[4]

While PSEG is hopeful that, under the Biden administration, there will be a federal carbon policy that recognizes the importance of preserving nuclear generation to achieve a carbon-free future, there is currently no such policy. In any event, the ZEC law protects New Jersey residents by requiring that payments from any federal or regional solution that compensate the plants for their resilience, fuel diversity, air quality, or other environmental attributes be deducted from the amounts of any ZEC payments.

3. Levitan's Analysis Again Fails To Follow The ZEC Law.

PSEG was pleased to hear some of Levitan's findings, such as those recognizing the environmental value of the plants, and the acknowledgement that the plants are not profitable – even after Levitan's flawed adjustments.

However, Levitan's analysis again rejects the concept of operational and market risk, which fails to follow the ZEC statute and this Board's application of the statute in its April 2019

[2] PSEG Answer to ENV-1, ERM, "Impact of PSEG Nuclear Unit Shutdowns on Greenhouse Gas Emissions," at 5.
[3] PSEG Answer to ENV-1, PA Consulting, "The Impact of Nuclear Generation Retirements on Emissions and Fuel Diversity in New Jersey," at 36.
[4] New Jersey's solar renewable energy credits ("SREC") for solar generation in the state are approximately $217/MWh and the value of the off-shore wind credits ("OREC") from New Jersey's first solicitation are at least $46/MWh per Lazard's study supporting the BPU's Order on Offshore Wind. 2020 State of the Market Report, Vol. 2, p. 378 NJ RPS Compliance report (https://njcleanenergy.com/files/file/rps/EY19/RPS%20Comp%20EY%202005-2019%2002192020.pdf) p.3 (EY 2019 - Summary of Estimated RPS Compliance Results); In The Matter Of The Board Of The Board Of Public Utilities Offshore Wind Solicitation For 1,100 MW – Evaluation Of The Offshore Wind Applications, BPU Docket No. QO18121289, at 19 (June 21, 2019) ("The levelized Net OREC Cost ('LNOC') is $46.46/MWh.") (http://njcleanenergy.com/files/file/6-21-19-8D.PDF).

order.[5] The ZEC statute requires consideration of risks because businesses cannot prudently operate if projected revenue is just enough to cover costs, only if all goes according to plan. Just last year Salem 1 experienced a maintenance issue that required that the plant be shut down and defueled to allow repair and inspection of its four steam generators, resulting in a 30-day forced outage and over $10M of unplanned costs. In 2019, this Board properly recognized those risks. The Board should again reject Levitan's proposed, and impermissible, deviations from the ZEC statute, and again properly consider operational and market risks for these applications as well.

As it did during the first ZEC proceeding, PSEG has opened its books regarding the financial condition of the plants, and provided extensive data regarding projected revenues and costs. The Company takes very seriously the integrity of its submissions.

Conclusion

As Levitan recognized, the Salem 1, Salem 2, and Hope Creek plants are not profitable. In fact, the market conditions for nuclear plants have only gotten worse since the first ZEC process. Assessed under the proper statutory standard, projected revenues from the PSEG plants will not cover their projected costs and risks, including the operational and market risks that result from continued operation. To meet the state's goal of preserving nuclear, the Board should take the appropriate steps to extend the ZEC at its existing level.

Respectfully submitted,

[5] See BPU Order Determining the Eligibility of Hope Creek, Salem 1, and Salem 2 Nuclear Generators to Receive ZECs, at 13-15 (April 18, 2019).