**MONITORING ANALYTICS, LLC**
2621 Van Buren Avenue, Suite 160
Eagleville, PA 19403

**BEFORE THE NEW JERSEY BOARD OF PUBLIC UTILITIES**

| | | |
|---|---|---|
| In the Matter of the Application for PSEG Nuclear LLC and Exelon Generation Company, LLC for the Zero Emission Certificate–Salem Unit 1, Salem Unit 2, and Hope Creek Unit | ) ) ) ) ) ) ) | BPU Docket Nos. ER20080557, ER20080558, and ER20080559 |

Pursuant to the Order issued in this proceeding effective September 10, 2020, Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM Interconnection, L.L.C. ("PJM") ("Market Monitor"), submits this brief. This case concerns applications filed by PSEG ("PSEG") and ("Exelon") (collectively, "Applicants") for nuclear units at the Salem 1 and Salem 2 and Hope Creek power stations ("Units") to receive Zero Emissions Credits ("ZECs") under the ZECs Statute (or "Act").[1] In order for the applications to be granted, Applicants must demonstrate that they meet the criteria set forth in the Act. The most significant of these criteria, and the only one addressed by the Market Monitor on brief, is the financial criterion, which refers to the Act's requirement that an Applicant must:

> … demonstrate to the satisfaction of the board ... that the nuclear power plant's fuel diversity, air quality, and other environmental attributes are at risk of loss because the nuclear power plant is projected to not fully cover its costs and risks, or alternatively is projected to not cover its costs including its risk-adjusted cost of

[1] "ZECs Statute" or "Act" means the statute creating Zero Emissions Credits (ZECs), P.L. 2018, c. 16, N.J.S.A. 48:3-87.3 et seq. PSEG owns 57 percent and Exelon owns 43 percent of each of Salem 1 and Salem 2; PSEG owns 100 percent of Hope Creek.

> capital, and that the nuclear power plant will cease operations within three years unless the nuclear power plant experiences a material financial change …[2]

Applicants fail to demonstrate that any of the Units meet the financial criterion. The analyses offered by applicants concerning the financial criterion overstate costs, understate revenues and overstates risks. The applications should be denied based on the insufficiency of the applications alone. The applications can be denied without consideration of any other arguments or evidence in the record.

Nevertheless, the record contains ample evidence for an affirmative finding that the applications do not meet the financial criterion. On January 29, 2021, the Market Monitor submitted testimony in the form of a report analyzing the costs, revenues and risks ("Market Monitor Report").[3] The Market Monitor Report demonstrates that none of the applications meet the financial criterion.

The ZECs Statute requires no consideration of the Applicants' stated intent to shut down the Units if the applications are denied. Assertions that the Units will shut down regardless of the Board's findings on the financial criterion are outside of the scope of the ZECs statute and are inherently speculative. The ZECs Statute provides for subsidies based on an objective showing of need. The record supports a finding that the financial criterion has not been met. The applications should be denied.

---

[2] N.J.S.A. 48:3–87–87.5(e)(3).

[3] *See* IMM-1 (Analysis of NJ Zero Emissions Certificate (ZEC) Applications).

## I. ARGUMENT

### A. The Core Issue in this Case Is Whether Applicants Fail to Meet the Financial Criterion in the ZECs Statute.

On May 3, 2018, New Jersey enacted the ZECs Statute, which provides a process for owners of nuclear power plants to establish eligibility under certain criteria to receive subsidies.[4] Subsidies should only be paid to a nuclear plant where an applicant demonstrates its eligibility under the applicable criteria.[5] No criteria other than those in the ZECs Statute should be considered. Applicants have the burden of proof.[6] No presumption exists that any Unit meets the criteria.[7] If no plant can establish that it meets the criteria, then no plant should receive ZECs.[8]

Showing eligibility for ZECs requires meeting five criteria.[9] Four criteria are not contested by and are not addressed by the Market Monitor.[10] Only one, the financial

---

4 P.L. 2018, c. 16, N.J.S.A. 48:3-87.3 et seq.

5 *See I/M/O the Implementation of L. 2018, c.l6 Regarding the Establishment of a Zero Emission Certificate Program for Eligible Nuclear Power Plants; Application for Zero Emission Certificates of Salem 1 Nuclear Power Plant; Application for Zero Emission Certificates of Salem 2 Nuclear Power Plant; Application for Zero Emission Certificates of Hope Creek Nuclear Power Plant*, BPU Docket Nos. E018121338, E018121339, & E018121337 (April 18, 2018) ("ZECs I Order").

6 ZECs I Order at 7.

7 *Id*. at 2 ("If the Board was to determine, in its discretion, that no nuclear power plant that applied satisfies the objectives of the Act, the Board shall be under no obligation to certify any nuclear power plans as an eligible nuclear power plant."), citing N.J.S.A. 48:3–87.5(j).

8 *Id*.

9 *Id*. at 7 ("Pursuant to the Act, to be certified as eligible, a plant shall: 1) be licensed by the U.S. Nuclear Regulatory Commission ("NRC") through 2030; 2) demonstrate a significant and material contribution to New Jersey air quality (minimizing emissions); 3) demonstrate anticipated plant shutdown within three years due to its financial situation; 4) certify that the facility does not receive any subsidies from other entities or agencies; and 5) submit an application fee.").

10 *Id*.

criterion, requires significant objective analysis. To satisfy that criterion, Applicants must show that the Units are (i) "at risk of loss because the nuclear power plant is projected to not fully cover its costs and risks, or alternatively is projected to not cover its costs including its risk-adjusted cost of capital," and (ii) "that the nuclear power plant will cease operations within three years unless the nuclear power plant experiences a material financial change…"[11]

Applicants did not submit analysis or evidence concerning their risk adjusted cost of capital. The only standard addressed in the record is whether the Units are projected to cover costs and risks.

The issue presented to the Board is whether Applicants met the financial criterion. The record supports a zero or negative value for market and operational risk. The projected revenues and costs do not justify subsidies under the financial criterion. The applications should be denied.

**B. Applicants Fail to Show the Units Satisfy the Financial Criterion.**

The analysis submitted by Applicants fails to sustain Applicants' burden to demonstrate that any of the Units satisfy the financial criterion. Such failure is sufficient basis for denial of the applications even without consideration of the evidence in the Market Monitor Report showing that the financial criterion is not satisfied. The record shows that Applicants' analysis overstates costs, understates revenues and overstates risks.[12]

---

11 N.J.S.A. 48:3–87–87.5(e)(3).

12 *See* IMM-1 at 26–32 (operating costs); 10–19 (revenues); 19–26 (risks).

The Market Monitor Report affirmatively shows that the plants' asserted benefits are not at risk of loss because they are projected to fully cover their costs and risks over the next three years.[13]

***Revenues***

Applicants' projected revenues understate revenues. If expected energy revenues are calculated using historical average generation, adjusted for refueling outages, and forward prices as of January 4, 2021, Hope Creek 1, Salem 1 and Salem 2 would earn substantially more in energy revenue than PSEG's projections over the three year period 2022/2023-2024/2025.[14]

In addition, Applicants' projected energy market revenues do not include substantial revenue increases likely to occur as a result of PJM's implementation of new rules in the energy markets for reserve pricing and fast start pricing.[15]

If expected capacity revenues are calculated using historical average EMAAC Base Residual Auction (BRA) prices, Hope Creek, Salem 1 and Salem 2 would earn substantially more in capacity revenue than included in PSEG's projections for the three energy years 2022/2023 through 2024/2025.

The Market Monitor Report demonstrates (at 18–19) that Applicants' total projected revenues are understated.

***Costs***

The Market Monitor's analysis of Unit costs is based on Applicants' avoidable costs as submitted by Applicants to the Electric Utility Cost Group (EUCG) Nuclear Committee. EUCG is a cooperating group of nuclear plant representatives whose

---

13 *See id*. at 7.

14 *See id*. at 10–15.

15 *See id*. at 3, 14–15.

primary goal is to optimize costs and reliability performance of participating plants.[16] The costs for the units submitted by Applicants to the EUCG are lower than the costs asserted by Applicants, and an appropriate adjustment is included the Market Monitor Report.[17] Applicants do not provide a good reason for using costs in its Applications that are higher than those it provided to EUCG. The Board can be confident that cost information provided by Applicants to EUCG is unbiased and accurate.

Overall, the Market Monitor Report shows that Applicants' costs are overstated.[18]

***Risks***

The Market Monitor explicitly analyzed the Applicants' proposed approach to quantifying the risks of the plants.[19] The Applicants proposed to include an unsupported operational risk adder and a market risk adder to expected costs.

*Operational Risk Adder*

The Applicants' operational risk adder is not based on analysis. It is simply asserted. Applicants add an arbitrary 10 percent to actual operating costs to reflect the unknown possibility that costs may be higher by an unspecified amount, despite management efforts to reduce costs.[20] Applicants do not explain why costs should not

---

16 *See id*. at 26 & n.25 (Electric Utility Cost Group. Nuclear Committee. (Jan. 25, 2021) <*https://www.eucg.org/committees/nuclear.cfm*>.).

17 *See id.* at 26–28.

18 *See id*.at 29.

19 *See id.* at 19–26.

20 *See id*. at 22–24.

be expected to decline, as they did during the first year of the first implementation period.[21]

The proposed operational risk adder is an unsupported request to require customers to pay an additional subsidy to cover an asserted and unquantified possibility that costs will be greater than Applicants' estimates while not providing customers any benefit if costs are lower and not recognizing the role of management in controlling costs and not providing incentives for management to continue to reduce costs.[22]

***Market Risk Adder***

Applicants' proposed market risk adder is designed to hold Applicants harmless from reductions in revenues and increases in costs.[23] Applicants make no attempt to account for the probabilities of costs being lower than expected or revenues being higher than expected, an essential element to any proper analysis of risk.[24] The Applicants' market risk adder is based on one extreme tail of the distribution of expected prices and revenues.

Applicants do not and cannot explain why this is an appropriate measure of risk. Applicants fail to explain why they do not use the mean expected revenues or a weighted average of the range of expected revenues. Applicants ask customers to hold them harmless through the guaranteed risk adder from low probability events that are within the control of Applicants including higher operational costs. Applicants examine the probability distribution of potential outcomes, pick only the very low probability

---

21 *See id*. at 29–30.

22 *See id.* at 24.

23 *See id*. at 20.

24 *See id*.

negative events that result in risk adders and assert that this is the definition of risk; it is not.

In proposing risk adders, Applicants request that ratepayers not only cover their costs, but that ratepayers should pay a significant additional markup over actual revenues to protect Applicants from any possibility that costs are higher or revenues lower than Applicants actually expect.

The ZECs Statute does not provide for a guarantee nor does it provide for a one sided analysis of risk.[25]

Applicants' analysis does not comply with the standard included in the ZECs Statute. The ZECs Statute provided for an accounting of risk in evaluating whether the financial criterion is satisfied.[26] Applicants retain the burden to demonstrate risks but fail to identify actual risks. Applicants' mischaracterization of risk as uncertainty is not relevant to the financial criterion. The financial criterion considers risks as they affect the decision on whether to cease or continue operations. Uncertainty about unlikely and worst case scenarios does not drive rational decisions on market exit.

Applicants purport to account for risk, but do not. Applicants' analysis improperly incorporates a guarantee instead of risk. Such adjustments are outside of the scope of the financial criterion defined in the ZECs Statute and must be excluded.

The Market Monitor Report demonstrated that the actual value for market risk, when accounting for the full range of possible outcomes, is negative and not positive. In

---

25 *See, e.g.*, ZECs I Order at 8; *see also* Senator Stephen Sweeney, Committee Meeting (Dec. 20, 2017), cited in Comments of PJM Power Providers Group, BPU Docket No. EO18080899 (Jan. 31, 2019) at 1.

26 N.J.S.A. 48:3–87.5(e)(2).

the interests of being conservative, the Market Monitor set the market risk adder to zero.[27]

The statutory process itself mitigates the risk asserted by Applicants, in addition to the factors documented in the Market Monitor Report. The Applicants fail, in their risk analysis, to recognize that the ZECs Statute provides that the Applicants may reapply for ZECs one year later if ZECs are not provided in response to the first application. It is illogical and counter factual to assume that the opportunity to demonstrate a material financial need in a subsequent third ZECs period would not be taken into account in a decision on whether to shut down the Units.[28]

In addition to the direct refutation of the Applicants' approach to risk, it is logically incorrect to provide for a risk adder to address risk that is within the power of the Applicants to address and within the power of the Board to grant. If the plants' revenues exceed costs in the next year, there would likely be no reason to reapply for ZECs, but the option is available. If the Applicants believe that the results in the next year support it, the Applicants can reapply and the Board could grant ZECs for the following three years, if justified.

### C. The Market Monitor Report Shows No ZECs Subsidies Are Justified.

The Market Monitor Report concludes that expected revenues for Hope Creek and Salem 2 exceed expected costs, and that continues to be the case after explicitly accounting for risk. Hope Creek 1 unit and Salem 2 unit are projected to more than cover their avoidable costs over the next three years. The Salem 1 unit is expected to face a de minimis shortfall over the next 3 years. The de minimis shortfall projected for

---

27 *See id*. at 24–26.

28 *See id.* at 7.

Salem 1 does not justify a subsidy. In addition, the overpayment of ZECs subsidy revenues for 2019/2020 more than covers the de minimis shortfall for Salem 1. Applicants have not demonstrated for any of the units that the plant "will cease operations within three years unless the nuclear power plant experiences a material financial change."[29]

**D. Criteria Not in the Statute Should Not Influence Findings Concerning the Financial Criterion.**

The ZECs Statute must be administered by its terms. The Board has acknowledged "its statutory obligation to review the record, analyze the application materials, and exercise its independent discretion to determine whether the applications satisfy the eligibility requirements specified."[30]

Reliance on Applicants' subjective statements of intent to shut down the plants are speculative.[31] Applicants have not demonstrated an objective basis for shutting the Units down. Whether Applicants could shut down the Units is not established in the record. Applicants' statements ignore factors that could prevent a unilateral decision. For example, federal regulatory requirements apply to Applicants' decision to retire a nuclear plant operating in PJM.[32] New Jersey may have a legislative and/or regulatory response to a decision to cease operations. Even if Applicants' subjective statements had relevance to the financial criterion, whether Applicants would or could retire a nuclear plant that meets the financial criterion has not been established in the record.

---

[29] *Id*.

[30] ZECs I Order at 8, citing N.J.S.A. 48:3-87.5(d).

[31] *See* Tr. at 123:9–10 (As Chairman Fiordaliso observed, "I don't know what PSEG is going to do, just as you don't know.").

[32] *See* Tr. at 80:8–18.

Speculative and unsubstantiated statements should not be accepted as a substitute for meeting the requirements of the ZECs Statute.

## II. CONCLUSION

The Market Monitor respectfully requests that the Commission afford due consideration to its argument on brief as it implements the ZECs Statute.

Respectfully submitted,


Jeffrey W. Mayes

General Counsel
Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Eagleville, Pennsylvania 19403
(610) 271-8053
*jeffrey.mayes@monitoringanalytics.com*

Joseph E. Bowring
Independent Market Monitor for PJM
President
Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Eagleville, Pennsylvania 19403
(610) 271-8051
*joseph.bowring@monitoringanalytics.com*


Dated: March 26, 2021

## CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Eagleville, Pennsylvania,
this 26th day of March, 2021.

Jeffrey W. Mayes
General Counsel
Monitoring Analytics, LLC
2621 Van Buren Avenue, Suite 160
Eagleville, Pennsylvania 19403
(610) 271-8053
*jeffrey.mayes@monitoringanalytics.com*