



## I. BACKGROUND

On May 23, 2018, Governor Phil Murphy signed into law L. 2018, c. 16 (C.48:3-87.3 to -87.7) (“Act”). The Act required the Board to create a program and mechanism for the issuance of ZECs, each of which represents the fuel diversity, air quality, and other environmental attributes of one megawatt-hour of electricity generated by an eligible nuclear power plant selected by the Board to participate in the program. Under the program, certain eligible nuclear power plants may be approved to provide ZECs for the State’s energy supply, which in turn will be purchased by New Jersey’s four investor-owned electric distribution companies, i.e., Atlantic City Electric (“ACE”), Jersey Central Power and Light Company (“JCP&L”), Public Service Electric and Gas Company (“PSE&G”), and Rockland Electric Company (“RECO”), and municipal electric distribution company Butler Electric Utility (“Butler”) (collectively, “EDCs”). The Act identified the basic steps required to establish this program, including program logistics, funding, costs, application, eligibility requirements, selection process, and the timeframes for meeting several requirements of the Act.

The Act requires that, every three years, the Board shall complete a proceeding to certify applicant nuclear power plants as eligible for the program and establish a rank-ordered list of the nuclear power plants eligible to be selected to receive ZECs. N.J.S.A. 48:3-87.5(e)(1) through (5) specify the criteria for an applicant to be certified by the Board as an eligible nuclear power plant, including submission of an application fee to the Board in an amount to be determined by the Board, not to exceed \$250,000, to be used to defray the costs incurred by the Board to administer the ZEC program. Pursuant to N.J.S.A. 48:3-87.5(d), if the Board determines, 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 plant as eligible.

## II. PROCEDURAL HISTORY

On August 29, 2018, the Board approved an Order initiating the creation of the ZEC program.<sup>1</sup> In its November 19, 2018 Orders, the Board approved the ZEC applications, the program process, and the tariffs associated with collection of the funds.<sup>2</sup> By its December 18, 2018 Order, the Board

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<sup>1</sup> I/M/O the Implementation of L. 2018, c. 16 Regarding the Establishment of a Zero Emission Certificate Program for Eligible Nuclear Power Plants, BPU Docket No. EO18080899 (August 29, 2018).

<sup>2</sup> I/M/O the Implementation of L. 2018, c. 16 Regarding the Establishment of a Zero Emission Certificate Program for Eligible Nuclear Power Plants, BPU Docket No. EO18080899 (November 19, 2018) (Agenda Item 9A: Order Establishing the Program, Application, and Procedural Process; I/M/O the Implementation of L. 2018, c. 16 Regarding the Establishment of a Zero Emission Certificate Program for Eligible Nuclear Power Plants and I/M/O the Application of Jersey Central Power and Light Company for Approval to Implement a Zero Emission Certificate (“ZEC”) Charge and Tariff Page(s) Related Thereto in Support of the ZEC Program Authorized by N.J.S.A. 48:3-87.3 et seq. and a Board Order Initiating the ZEC Program, BPU Docket Nos. EO18080899 and EO18091002 (November 19, 2018) (Agenda Item 9C); I/M/O the Implementation of L. 2018, c. 16 Regarding the Establishment of a Zero Emission Certificate Program for Eligible Nuclear Power Plants and I/M/O the Application of Atlantic City Electric Company for Approval to Implement a Zero Emission Certificate (“ZEC”) Charge and Tariff Page(s) Related Thereto in Support of the ZEC Program Authorized by N.J.S.A. 48:3-87.3 et seq. and a Board Order Initiating the ZEC Program BPU Docket Nos. EO18080899 and EO18091003 (November 19, 2018) (Agenda Item 9D); I/M/O the Implementation of L. 2018, c. 16 Regarding the Establishment of a Zero Emission Certificate Program for Eligible Nuclear Power Plants and I/M/O Public Service Electric and Gas Company’s Request for Approval

approved the selection of Levitan and Associates, Inc. (“Levitan” or “LAI”) to serve as a consultant to Board Staff (“Staff”) and directed Staff to execute a contract for services.<sup>3</sup> With its February 27, 2019 Order, the Board approved the criteria established to rank eligible nuclear power plants for determination of how many of the eligible plants would receive ZECs without exceeding the cap established in the Act.<sup>4</sup> On April 18, 2019, the Board determined that the Hope Creek, Salem 1, and Salem 2 plants were eligible for the ZEC program and that they would receive ZECs in accordance with the Act.<sup>5</sup> Consequently, the Board directed the EDCs to submit final tariffs consistent with the Board’s Order, effective April 18, 2019. The initial ZEC eligibility period therefore began on April 18, 2019 and concludes at the end of Energy Year 2022 on May 31, 2022. The Board further directed Staff to return to the Board by July 31, 2019 with recommendations on the program’s continued and forward implementation.

In its July 10, 2019 Order, the Board authorized and directed Staff to present the ZEC price annually in August of each year (for the prior energy year) that selected nuclear power plants are eligible to receive ZECs. The Board accepted Staff’s recommended ZEC pricing methodology for the initial “stub period” between April 18 and May 31, 2019. The Board also directed the EDCs to purchase the number of ZECs in accordance with the Act and the July 10, 2019 Order and to make payments to the selected nuclear power plants by August 30 in the years 2019, 2020, 2021, and 2022; directed the owner(s) of each selected nuclear power plant to submit a signed and certified notification of continued operations to the Board by July 30 of 2020 and 2021 during the initial eligibility period (June 1, 2019 – May 31, 2022) in accordance with the Act and the July 10, 2019 Order; directed the owner(s) of each selected nuclear power plant to submit a personnel plan by April 18, 2021; and directed the owner(s) of each selected nuclear power plant to submit to the Board by July 30 of each year that the nuclear power plant is eligible to receive ZECs and a lay-off certification that no employees have been laid off by the nuclear power plant except for reasons enumerated in the Act. Additionally, the Board agreed that the ten-year ZEC efficacy study requirement be revisited after completion of the first ZEC eligibility period.

The Board also recognized and agreed with Staff about the need for a stakeholder process to solicit additional comments, recommendations, and input on the various aspects of continued

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of a Zero Emission Certificate Recovery Charge, BPU Docket Nos. EO18080899 and EO18091004 (November 19, 2018) (Agenda Item 9E); I/M/O the Implementation of L. 2018, c. 16 Regarding the Establishment of a Zero Emission Certificate Program for Eligible Nuclear Power Plants and I/M/O Rockland Electric Company’s Filing for Review and Approval of the Zero Emission Certificate Recovery Charge, BPU Docket Nos. EO18080899 and EO18091005 (November 19, 2018) (Agenda Item 9F); I/M/O the Implementation of L. 2018, c. 16 Regarding the Establishment of a Zero Emission Certificate Program for Eligible Nuclear Power Plants and I/M/O the Application of Butler Electric Utility for Approval to Implement a Zero Emission Certificate (“ZEC”) Charge and Tariff Page(s) Related Thereto in Support of the ZEC Program Authorized by N.J.S.A. 48:3-87.3 et seq. and a Board Order Initiating the ZEC Program, BPU Docket Nos. EO18080899 and EO18091018 (November 19, 2018) (Agenda Item 9G).

<sup>3</sup> I/M/O the Implementation of L. 2018, c. 16 Regarding the Establishment of a Zero Emission Certificate Program for Eligible Nuclear Power Plants, BPU Docket No. EO18080899 (December 18, 2018).

<sup>4</sup> I/M/O the Implementation of L. 2018, c. 16 Regarding the Establishment of a Zero Emission Certificate Program for Eligible Nuclear Power Plants, BPU Docket No. EO18080899 (February 27, 2018).

<sup>5</sup> I/M/O the Implementation of L. 2018, c. 16 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. EO18121338, EO18121339, and EO18121337 (April 18, 2019) (Order Determining the Eligibility of Hope Creek, Salem 1, and Salem 2 Nuclear Generators to Receive ZECs).

implementation of the ZEC program. The Board directed Staff to implement the stakeholder process and return to the Board with recommendations for an updated ZEC application, as well as updated eligibility and ranking criteria applicable to nuclear power plants seeking to demonstrate eligibility to the Board for the second eligibility period. On May 20, 2020, the Board approved Staff's recommendations on future ZEC program requirements and timelines. The Board approved Staff's modifications to the application that the Board will use as part of the process to determine which, if any, nuclear power plants will be eligible to receive ZECs during the next three-year eligibility period. Staff recommended releasing the application for public comment prior to its finalization. The Board also directed Staff to hire a consultant to aid in the analysis of the modification of the ZEC charge, as set forth at N.J.S.A. 48:3-87.5(j)(3).<sup>6</sup>

Staff issued the draft application for public comment on July 1, 2020 and accepted written comments through July 20, 2020.

### **III. ZEC Consultant**

The second ZEC eligibility period begins on June 1, 2022 and concludes on May 31, 2025. Staff has prepared an RFQ for a consultant to assist Staff during the second eligibility period as Staff evaluates ZEC applications, develops preliminary findings and final recommendations on eligibility and ranking of applications, holds public meetings, and analyzes the ZEC charge.

### **IV. ZEC Applications**

The Board received written comments on the draft application from the New Jersey Division of Rate Counsel ("Rate Counsel"), PSEG Nuclear, LLC ("PSEG-N") and Exelon jointly, PJM Power Providers ("P3"), and the PJM Independent Market Monitor ("IMM"). Below is a summary of the comments received by the Board.

- In their joint comments, PSEG-N and Exelon noted that the Act requires an applicant to provide either information on a nuclear power plant's operational risks and market risks, or on its risk adjusted cost of capital, not both. The commenters requested that several questions be modified for this reason.
- Rate Counsel provided comments on each of the sections of the draft application. In general, they suggested that the Board should seek information for each of the past 10 years, to provide a clearer picture of each nuclear power plant's actual performance, and that applicants should provide supporting workbooks with formulae intact. Regarding financial information, Rate Counsel stated that the Board should require applicants to explain how initial book values were determined and provide annual year-end gross and net book values through 2019; provide any internal analysis of past or projected financial performance of the nuclear unit; conduct cash flow analysis with and without the ZEC subsidy; include internal financial presentations and analyses conducted by the applicant

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<sup>6</sup> Pursuant to N.J.S.A. 48:3-87.5(j)(3), starting in the second three-year eligibility period and for subsequent three-year eligibility periods thereafter, the Board may reduce the non-bypassable, irrevocable per kilowatt-hour charge (ZEC charge) imposed on electric public utilities' retail distribution customers pursuant to N.J.S.A. 48:3-87.5(j)(1) if the Board determines that the charge will be sufficient to prevent the retirement of eligible nuclear power plants.

for planning purposes; provide any audited financial statements that included calculations of market and operational risks; analyze subsidy requirements with and without operational and market risk adjustments; and explain any changes in methodology or results related to calculations of risk. Regarding environmental requirements, Rate Counsel stated that the applicants' environmental analyses should include consideration of future federal and State energy policies, including, but not limited to, offshore wind, electrification, energy efficiency, and future load forecasts. Regarding deactivation, Rate Counsel suggested that applicants should provide information on nuclear license extensions and model each nuclear power plant unit separately from any other nuclear unit. Finally, Rate Counsel suggested that applicants should provide documentation and analysis about the impact of the Federal Energy Regulatory Commission's December 19, 2019 Minimum Offer Price Rule decision on each individual unit.

- P3 provided a number of comments on the ZEC process, both retrospectively and prospectively. In general, they argued that the review process of applications should be longer, more comprehensive, and more transparent. They also argued that the Board should establish a process, similar to a traditional rate case, by which to ensure that costs of subsidized nuclear power plants are prudently incurred and that return on investment is just and reasonable. Further, they called on the Board to commence a separate inquiry that results in the definition and quantification of operational and market risks and clarification of who bears the burden of the risks. Regarding the financial section of the application, P3 stated that, in addition to providing the annual average unit bid price in the annual Base Residual Auction over the past five years, applicants should include all capacity auction bids by year, as well as any cost data submitted to PJM and the IMM as part of a unit-specific review process.
- The IMM provided nine specific suggestions related to the finances and operations of an applicant nuclear power plant and to recent policy proposals. More specifically, the IMM suggested that the application should require: completion by 100 percent of a nuclear power plant's owners; information on all planned maintenance and refueling outages over the next five years; all projected costs (including all inputs and adjustments), expenses, and earnings for each of the next five years; historical analysis of the costs of market and operational risks; a breakdown of historical revenues for the last five years; explanation of how forecast revenues account for the impact of PJM's Operating Reserve Demand Curve proposal; comparison of the expected benefits of PSEG's Fixed Resource Requirement proposal with the expected benefits of ZECs; and inclusion of expected revenues from ancillary services markets.

Staff considered the written comments and incorporated many of the suggestions regarding the proposed application (see Appendix A).

## V. DISCUSSION AND FINDINGS

Based on the above information, and in accordance with its May 20, 2020 Order, the Board **AUTHORIZES** Staff to issue an RFQ for a consultant to assist Staff in reviewing, evaluating, and providing recommendations on the eligibility and ranking (if applicable) of nuclear power plant applications in the second eligibility period. The consultant shall also aid in the analysis of the ZEC charge. The Board **DIRECTS** Staff to evaluate the responses to the RFQ and return to the Board with a recommendation on the award of contract.

The Board **FINDS** that the processes utilized in developing Staff's recommendations on the revised ZEC application were appropriate and provided stakeholders and interested members of the public with adequate notice and opportunity to comment. The Board has also reviewed stakeholder comments. In response to general comments about the review process, although the Board in the initial ZEC eligibility proceeding provided all process that was due under the Act, the Board notes that the second eligibility period is designed to offer much greater transparency and opportunity for stakeholder input and that all aspects of the review and evaluation of nuclear power plant applications, such as the review of an applicant's past and projected finances, will be considered.

The Board has also reviewed Staff's recommendations on modifications to the application and **FINDS** that the revised application requires applicants to submit information that is necessary and relevant to properly determine eligibility of an applicant nuclear power plant. The Board **APPROVES** the ZEC application and **ORDERS** that the ZEC application window is now open and will remain open until October 1, 2020. The Board **DIRECTS** applicants to file electronically with the Board Secretary and to submit an application fee of \$250,000. The applicant shall contact the Board's Chief Financial Officer for the proper procedure to submit the \$250,000 application fee. The Board will post information regarding the applications on its website as the Board receives them.

The Board **HEREBY DIRECTS** that applicants must submit notices of intent to file by August 19, 2020. The Board also **HEREBY DIRECTS** that persons or entities who seek access to information submitted on a confidential basis under this proceeding must submit such requests to the Board by August 26, 2020. Further, the Board **HEREBY DIRECTS** that persons or entities opposing a request for access to information submitted on a confidential basis under this proceeding must submit their letters or briefs in opposition to the request by September 2, 2020.

The Board **HEREBY DESIGNATES** President Joseph L. Fiordaliso as the presiding Commissioner, who is authorized to rule on all motions that arise during the pendency of final Board action as required under the Act and to modify any schedules that may be set as necessary to secure a just and expeditious determination of the issues. The Presiding Commissioner will issue a decision on all requests for access to confidential information on the basis of whether a party requesting such access is deemed essential to aiding the Board in its determinations under the Act, pursuant to N.J.S.A. 48:3-87.5(a). The Presiding Commissioner will also provide specific instructions to applicants relating to the service of applications and associated nondisclosure agreements in this matter.

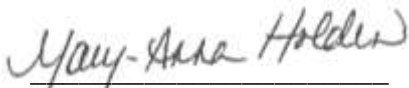
This Order shall be effective on August 12, 2020.

DATED: August 12, 2020

BOARD OF PUBLIC UTILITIES  
BY:



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PRESIDENT



MARY-ANNA HOLDEN  
COMMISSIONER



DIANNE SOLOMON  
COMMISSIONER



UPENDRA J. CHIVUKULA  
COMMISSIONER



ROBERT M. GORDON  
COMMISSIONER

ATTEST:



AIDA CAMACHO-WELCH  
SECRETARY

**In the Matter of the Implementation of L. 2018, c. 16 Regarding the Establishment of a  
Zero Emission Certificate Program for Eligible Nuclear Power Plants**

**BPU Docket No. EO18080899**

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# APPENDIX A

This CONFIDENTIAL application is for the Zero Emission Certificate (“ZEC”) program. It is intended to allow any eligible nuclear power plant to apply for credits that may be issued in the State of New Jersey.

New Jersey Board of Public Utilities  
August 12, 2020

# Zero Emission Certificate Application<sup>1</sup>

## I. Generation Applicant Information

Unit identification (name and/or designation): \_\_\_\_\_

Unit location: \_\_\_\_\_

Organization(s) that own(s) the nuclear power plant: \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Federal Nuclear Generator I.D. Number and License Number: \_\_\_\_\_

Federal Tax I.D. Number \_\_\_\_\_

New Jersey Tax Identification Number \_\_\_\_\_

*\* If the nuclear power plant is owned by multiple organizations, make note in this section and provide all relevant information on a supplemental page.*

### Primary Contact for Application

Title \_\_\_\_\_

Company Name \_\_\_\_\_

Daytime Phone Number \_\_\_\_\_ Email \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

### Authorized Applicant Representative (with ability to enter into agreements)

Name \_\_\_\_\_

Title \_\_\_\_\_

Phone \_\_\_\_\_

Email \_\_\_\_\_

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<sup>1</sup> The application must be completed by all owners of the applicant Unit. The application must also include an index of each item or document, with a brief description thereof, including the date.

*General Instructions:*

- *Calculate all requests for information past or future from the date of application.*
- *Unless noted otherwise herein, information should be presented on an annual basis rather than averaged or aggregated over the time period indicated.*
- *Represent all costs in nominal dollars.*
- *Provide copies of all workbooks, with all formulae intact, which are used to generate the attachments provided in applications.*
- *Energy year refers to the New Jersey Energy Year, which starts every June and extends for 12 months.*

## **II. Generation Asset Information and Operation**

1. Unit vintage and year applicant Unit was commissioned.
2. Total number of reactor units housed at the Unit.
3. Total Unit capacity/total Unit size per PJM rules (MW).
4. Description of the ownership of the Unit and/or statutory authority of the applicant.
5. Certification that all equipment located at or servicing the nuclear power Unit are as stringent as the standards and emission limits in N.J.A.C. 7:27 et seq.
6. A certified copy of the Unit's federal operating license demonstrating that the Unit is licensed to operate through 2030 or later.
7. Annual average energy produced by the Unit over each of the past ten (10) energy years and projected annual generation for the next five (5) energy years (MWh).
8. Annual average capacity and generation provided by the Unit into the energy and capacity markets over the past ten (10) energy years and projected annual capacity and generation for the next five (5) energy years (MW & MWh).
9. A list of the incidents, by hours, over the past ten (10) years when an energy bid from the Unit was not accepted into PJM markets. Be prepared to provide documentation upon request.
10. Explanation of whether receipt of the ZECs will have any impact on the Unit's participation in the wholesale markets. If so, how? (Response must be both quantitative and qualitative and include discussion of anticipated impact on the BGS auction and a comparison of costs and benefits.) For Units currently receiving ZECs, explain and show how receipt has impacted the Unit's participation in wholesale markets.
11. Total annual Unit run-time over the past ten (10) years (hours). Please provide full-year hours online and explain any significant deviation from the five-year average of hours online.
  - a. Identify all maintenance and refueling outages on an energy year basis over the past ten (10) years (hours).
12. All planned maintenance and refueling outages for the Unit over the next five (5) years.
13. Plant personnel count for application year and ten (10) years previous (annual).

### **III. Zero Emission Credit Justification - Financial**

#### **GENERAL**

1. Current net book value of the Unit at the time of application. Explain how the initial book value was determined and provide annual year-end gross and net book values through 2019.
2. Provide current and historical financial statements conducted by the Unit's owner/operator for each Unit for the past ten (10) years and the next five (5) years, including supporting workbooks and input assumptions. Include line items for:
  - a. Energy revenues
  - b. Capacity revenues
  - c. Variable operation and maintenance expenses
  - d. Fixed operation and maintenance expenses
  - e. Overhead and other non-operating expenses
  - f. Capital expenditures
  - g. Cost of capital
  - h. Cost of operational and market risks
3. Provide any internal analyses or presentations of past or projected financial performance of the Unit.
4. Provide a list of federal forms SEC 10-K, 10-Q, and other documents provided to the Securities and Exchange Commission ("SEC") for the past ten (10) years; list and highlight references to the applicant Unit.
5. Shareholder payout over the past ten (10) years attributed to the Unit and operator.

#### **COSTS**

6. Provide certified costs over the past ten (10) energy years, including, but not limited to: operation and maintenance expenses; fuel expenses; spent fuel expenditures; non-fuel capital expenditures; long-term fuel storage costs; other capital costs, including uranium fuel pricing for the Unit; and all overhead costs, including any overhead costs allocated to or from other entities outside the direct plant operations.
7. Provide certified cost projections over the next five (5) energy years, including all inputs and adjustments. Cost projections should include but may not be limited to: operation and maintenance expenses; investments; fuel expenses; spent fuel expenditures; non-fuel capital expenditures; long-term fuel storage costs; other capital costs, including uranium fuel pricing for the Unit; all other expenses, including, but not limited to, fully allocated overhead costs; and the projected costs of operational and market risks. Provide supporting documentation.
8. Provide current cost of capital, as well as required cost of capital for each of the next five (5) years, plus a detailed accounting of how the cost of capital was determined.

## REVENUES/INCOME

9. Identify and describe any obligations/commitments under which the Unit has operated in the past ten (10) years and/or currently operates regarding the current New Jersey Basic Generation Service (“BGS”) and any PJM markets, including any Reliability Must Run contracts, the duration of such obligations and/or commitments, and supporting documentation and calculations.
10. Provide a list of all active and anticipated contracts for capacity and/or energy supply by the Unit outside of the BGS and PJM markets. Include capacity and/or energy contracted, type of market, length of obligation, and customer. Be prepared to provide documentation upon request.
11. Provide the annual average Unit bid price in the annual Base Residual Auction (“BRA”) over the past ten (10) years (\$/MW), including all capacity auction bids by year, as well as any cost data submitted to PJM and the PJM Independent Market Monitor as part of a unit-specific review process.
12. Provide a list of historical revenues received by the Unit over the past ten (10) years, including, but not limited to, capacity and energy payments received from PJM, revenues from hedges, and ancillary revenues. Indicate all revenue sources.
13. Provide all revenue projections with accompanying revenue sources over the next five (5) years, including, but not limited to, revenues related to:
  - a. Unit-specific hedges to mitigate market exposure of the Unit;
  - b. Capacity market revenues at the locational clearing price for the Unit in the Base Residual Auction regardless of whether the Unit cleared in the PJM capacity market auction;
  - c. Energy market revenues, including relevant underlying fuel price forecasts and relevant PJM forward power market curves; and
  - d. Contracts outside the PJM markets.
14. Please state all of the assumptions used in the revenue projections.
  - a. Include forecasts of locational PJM capacity and energy market prices for the Unit.
  - b. Include and itemize expected revenues from PJM capacity and energy markets, ancillary services markets, and reserves markets.
  - c. Show the underlying load forecasts and forecasts of the entry and exit of resources in the PJM market.
  - d. Explain how forecast revenues account for the impact of the Federal Energy Regulatory Commission’s (“FERC’s”) decision on PJM’s Operating Reserve Demand Curve proposal.
  - e. Account for and explain changed capacity revenue expected to result from the FERC capacity market Minimum Offer Price Rule decisions on State Subsidies.
  - f. Include all citations and worksheets used for the calculations in Excel form.
  - g. Be prepared to provide additional documentation upon request.
15. Provide a certification that the nuclear power Unit does not receive any direct or indirect payment or credit under a law, rule, regulation, order, tariff, or other action of this State or any other state, or a federal law, rule, regulation, order, tariff, or other action, or a regional compact, despite its reasonable best efforts to obtain any such payment or credit, for its fuel diversity, resilience, air quality, or other environmental attributes that will eliminate the need for the nuclear power plant to retire.



16. Provide a detailed list and description of any subsidies or grants **received** for the Unit from federal sources, state sources, or other governmental agency for the applicant Unit in the past ten (10) years. Include the monetary amount received, exemptions for capacity bidding, and/or tax incentives. Be prepared to provide documentation upon request.
17. Provide a list and description of any subsidies or grants **anticipated** for the Unit from federal sources, state sources, or any other governmental agency for the applicant Unit. Include the monetary amount received, exemptions for capacity bidding, and/or tax incentives. Be prepared to provide documentation upon request.

## RISKS

18. Provide estimated costs of operational risks and market risks for the Unit:
  - a. Provide a detailed explanation, including supporting workbooks, of how the costs of operational risks and market risks were calculated for energy years 2023–2025; and
  - b. Explain how the cost of operational risks and market risks would be avoided by ceasing operations.
  - c. Previous ZEC recipients should provide an update of the costs of operational and market risks.
19. Provide the estimated risk-adjusted cost of capital for the Unit:
  - a. Provide a detailed explanation, including supporting workbooks, of how the risk-adjusted cost of capital was calculated for energy years 2023–2025; and
  - b. Provide the methodology used to determine the risk-adjusted cost of capital, along with supporting documentation and industry benchmarks it deems appropriate, and juxtapose this against the original cost of capital.
20. For Units that participated in the initial eligibility period, to the extent that the applicant has made any changes in the methodology or results related to calculating either (a) the costs of operational risks and market risks or (b) the risk-adjusted cost of capital, please provide an explanation of those changes.

## CASH FLOW ANALYSIS

21. Provide all presentations, transcripts, and similar information made by the applicant to investors, equity analysts, and rating agencies for the past ten (10) years regarding the Unit.
22. For Units that participated in the initial eligibility period, provide a comparison analysis of projected cash flows at the time of the last application vs. the actual cash flows for the time the Unit received ZECs. Include in this analysis an explanation of the extent to which the costs of market and operational risks anticipated in the initial eligibility period were actually incurred or not incurred and, if incurred, how these costs impacted cash flow metrics. Provide all backup documentation.
23. Provide an explanation of whether the applicant has reported (a) the costs of operational and market risks or (b) the risk-adjusted cost of capital in any of the applicant's audited financial statements in the past ten (10) years. If so, provide the applicable financial statements.
24. Provide projected earnings over the next five (5) years and explain assumptions used in the projection, including regarding taxes, depreciation, interest, and any other relevant values.

25. Provide a projection of subsidy requirements (\$/year) by Unit and MWh produced, in each of the next five (5) years, to maintain minimum revenue requirements required to fully cover all costs. Provide scenarios including and excluding either (a) the costs of operational and market risks or (b) the risk-adjusted cost of capital.
26. Provide any analyses that estimate the total net benefit (after costs) of entering into unit-specific hedges for each year from 2017–2021.

## **IV. Zero Emission Credit Justification - Environmental**

1. Provide an explanation, including any studies and relevant data, related to how the Unit makes a significant and material contribution to air quality in New Jersey by minimizing harmful emissions that (a) result from electricity consumed in New Jersey or (b) adversely affect the citizens of New Jersey, and an explanation as to how a retirement would significantly and negatively impact New Jersey's ability to comply with State air emissions reduction requirements. Include air dispersion modeling results and supporting files.
2. Provide a detailed description, including any studies and relevant data, of the greenhouse gas ("GHG") emissions avoided by this Unit's operation ten (10) years prior to and projected five (5) years beyond the application date. Identify the emission sources that will be displaced by continued operation of the Unit.
3. If applicable, discuss how the Unit's production of electricity generation will support the BPU's Renewable Portfolio Standards ("RPS") requirements, State of New Jersey Energy Master Plan goals, and cost-effective transition to a carbon-neutral supply.
4. Project what generation assets would fulfill the State of New Jersey's capacity and energy requirements if the Unit were to shut down. Include consideration of future federal and New Jersey energy policies, including, but not limited to, offshore wind, solar, electrification, energy efficiency, and future load forecasts. Include assumptions, supporting data, and source information for this analysis.
  - a. If the retirement of the Unit is projected to increase in-state greenhouse gas emissions from New Jersey generators, provide a breakdown in MWh of the projected replacement generation (presented separately for each type of generation) and a breakdown in million metric tons of the projected increased emissions.
5. Provide a list of all submissions of data and documentation provided by the applicant and related to the Unit and its surrounding property to the U.S. Environmental Protection Agency ("EPA"), including permits, permit violations, enforcement actions, outstanding environmental compliance requirements, and remedial actions planned, ongoing, and completed over the past ten (10) years to demonstrate that all standards and requirements are being met. Be prepared to provide documentation upon request.
6. Provide a list of all submissions of data and documentation provided by the applicant and related to the Unit and its surrounding property to the New Jersey Department of Environmental Protection ("NJDEP"), including permits, permit violations, enforcement actions, outstanding environmental compliance requirements, and remedial actions planned, ongoing, and completed over the past ten (10) years to demonstrate that all standards and requirements are being met. Be prepared to provide documentation upon request.
7. Describe the practices of the Unit regarding nuclear waste disposal and storage. Also describe the Unit's remaining on-site capacity for dry storage and include a relevant schedule of license or permit renewals.

## **V. Impact of the Unit's Deactivation**

1. Indicate the remaining useful life of the generating Unit.
2. Provide information on any planned license extension requests for the Unit, including any financial modeling done in association with such planning.
3. Estimate the costs that would be incurred by the applicant to shut down the Unit. What costs would be funded by the Unit's decommissioning funds, and what costs would be funded by the applicant?
4. Demonstrate the impact on ownership and applicant's earnings during each of the next five (5) years, assuming that the Unit shuts down. Include any financial impact(s) to the parent organization.
5. Explain the avoided costs to the applicant if the Unit is deactivated. Please include the costs associated with fuel, salary, O&M, capital improvement projects, permitting, and the costs of all other relevant factors involved. Provide backup documentation.
6. Provide results from internal or commissioned dispatch modeling of the impact of the Unit's retirement scenarios.
  - Include all assessments of avoided emissions, based on differential (with and without each Unit claimed for ZECs) scenario modeling
  - Include all work papers and modeling inputs and outputs
  - If no such modeling has been conducted, include an explanation and computation of avoided emissions from retention of the Unit.
7. Describe the status of decommissioning funds for the Unit as of the date of the application, include decommissioning status reports filed with the Nuclear Regulatory Commission ("NRC"), and identify any shortfall of decommissioning funds resulting from early retirement of the Unit.

## **VI. Supplemental Submissions with the Application**

Please provide the following:

1. A certification that the nuclear power generation Unit will cease operations within three (3) years unless the nuclear power plant experiences a material financial change. This certification must specify the necessary steps required to cease the nuclear power plant's operations. Also:
  - a. Identify and describe all of the applicant's commitments and obligations to the NRC that would be required in advance of a unit shutdown.
  - b. Indicate the earliest date that the applicant could access decommissioning trust funds for the Unit.
  - c. Indicate the earliest date that the applicant could realistically shut down the Unit per NRC, PJM, or other commitments and obligations.
2. A spreadsheet showing the estimated average rate impacts of the applicant Unit receiving ZECs to New Jersey customers across all rate classes.
3. Explanation of how receipt of the ZECs will not lead to New Jersey ratepayers "double paying" for capacity, i.e., 1) paying ZEC-eligible Units for the environmental attributes while 2) not retaining the benefit of their capacity requirement, and therefore paying other units to fulfill New Jersey's PJM capacity commitment.
4. Documentation and analysis on the impact on the Unit of FERC's Minimum Offer Price Rule decisions on State Subsidies.
5. Comparison of the expected benefits of a Fixed Resource Requirement scenario with the expected benefits of ZECs.
6. A list of all data provided by the Applicant and related to the Unit to the FERC and NRC over the past ten (10) years. Be prepared to provide documentation upon request.
7. A list of all filings or submissions by the applicant relating to the Unit with the NRC over the past ten (10) years, including relating to all currently applicable or pending NRC approvals (i.e., plant expansions, site approvals, licenses, etc.). Be prepared to provide documentation upon request.
8. A list of any NRC enforcement or legal actions taken or filed against the Unit from ten (10) years prior to the application to present. Be prepared to provide documentation upon request.
9. An updated version of the data specific to the Unit provided to the Nuclear Energy Institute ("NEI") and the Electric Utility Cost Group ("EUCG") when responding to their latest survey.
10. A list of all audits performed by internal employees, commissioned, or performed by any governmental agency on the Unit over the past ten (10) years. Be prepared to provide documents upon request.
11. Certification of accuracy of application by applicant Company Officer.