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October 1, 2020

# VIA E-FILING AND DELIVERY

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

# Re: In the Matter of the Application of PSEG Nuclear LLC and Exelon Generation Company, LLC for the Zero Emission Certificate Program – Salem Unit 1, BPU Docket No. ER20080557

Dear Secretary Camacho-Welch:

PSEG Nuclear LLC ("PSEG") hereby submits this application, along with an application

fee of \$250,000 and an executed "Agreement of Non-Disclosure of Information Claimed to be

Confidential" ("NDA")<sup>1</sup> for the receipt of Zero Emission Certificates ("ZECs") under the ZEC Act

and pursuant to the Board of Public Utilities' ("Board") August 12, 2020 Order regarding the ZEC

program.<sup>2</sup> This application pertains to PSEG's Salem 1 nuclear generating plant ("Salem 1 Plant"),

<sup>&</sup>lt;sup>1</sup> PSEG has submitted its application without confidential information by electronic filing. PSEG hereby submits with this letter its application with confidential information via encrypted flash drive for filing and requests that this confidential information remain under seal and only available to parties designated pursuant to N.J.S.A. 48:3-87.5(a) and the Board's September 29, 2020 Order as described in Section VI of this letter. When the NDA is fully executed as provided in the Board's September 15, 2020 Order, PSEG will provide access to the confidential information to those parties.

<sup>&</sup>lt;sup>2</sup> This letter supporting the Salem 1 Plant application is substantially similar in substance to the letters PSEG has submitted in support of the applications for the Hope Creek and Salem 2 plants. For the Salem 1 and Salem 2 plants, PSEG submitted applications on its own behalf and on behalf of Exelon Generation.

owned 57.41% by PSEG and 42.59% by Exelon Generation Company, LLC ("Exelon Generation"), and has been filed simultaneously with applications, application fees and NDAs for the Hope Creek and Salem 2 generating plants.<sup>3</sup>

Through the issuance of the Board's *2019 Energy Master Plan Pathway to 2050* (the "Energy Master Plan") earlier this year, the State took a critical step in its path toward achieving ambitious clean energy goals and mitigating the threat of climate change. The Energy Master Plan detailed Governor Murphy's goal of 100% clean energy by 2050 and the New Jersey Global Warming Response Act of 2007 ("GWRA") goal to reduce economy-wide state greenhouse gas emissions 80% below 2006 levels by 2050. The Energy Master Plan acknowledged that, without the continued presence of nuclear power, the State's clean energy goals cannot be attained without exorbitant cost. As detailed in the Integrated Energy Plan published by the Rocky Mountain Institute, which modeled pathways to achieve the clean energy goals outlined in the Energy Master Plan, it would cost the State billions more annually to meet the State's goals in the event that nuclear plants in the State are retired.<sup>4</sup>

Through the ZEC Act, the Legislature recognized that in order to meet the State's clean energy goals and mitigate the harm from climate change, it needed to prevent the premature retirement of nuclear power plants, which are existing zero-emission sources of energy that provide 40% of New Jersey's electric power needs and more than 90% of the carbon-free power generated in New Jersey. The Legislature also entrusted the Board with a process to evaluate an

<sup>&</sup>lt;sup>3</sup> As the operator of Salem 1 and Salem 2, PSEG has been vested with the sole and exclusive authority to make retirement decisions for the plants, covering Exelon Generation's 42.59 % minority ownership share as well as PSEG's 57.41 % majority ownership share. The Salem plant submittals address all elements of the applications for 100% of the ownership interest and are submitted on behalf of both owners. When possible, PSEG has provided financial data for 100% of the plant. With respect to certain confidential information that could not be shared with PSEG, and other information, Exelon Generation has made separate submittals as additional supporting materials to the Salem 1 and Salem 2 applications.

<sup>&</sup>lt;sup>4</sup> See https://nj.gov/emp/pdf/New\_Jersey\_2019\_IEP\_Technical\_Appendix.pdf.

applicant nuclear plant's eligibility for ZECs; it is under this process that PSEG submits this application for the second eligibility period of June 1, 2022 through May 31, 2025.

This is the second time that PSEG has applied for ZECs. On April 18, 2019, the Board determined that the Hope Creek, Salem 1, and Salem 2 nuclear generators ("Hope Creek and Salem Plants") were eligible to receive ZECs from April 18, 2019 through May 31, 2022. This ZEC award compensates the Hope Creek and Salem Plants for their fuel diversity, resilience, air quality or other environmental benefits associated with their operation through May 31, 2022. This application process for the second round of ZECs is the next critical step in New Jersey's journey to protect its citizens from the impacts of climate change and to further its environmental goals.

The New Jersey Legislature's recognition that the ZEC program is a cost-effective means for the State to achieve its clean energy goals is further borne out by the fact that the ZEC is much more affordable to New Jersey customers than subsidies New Jersey provides to other carbon-free generation suppliers. Solar generation costs more than twenty times, and offshore wind costs more than four times, the cost of ZECs.<sup>5</sup> In addition, the Legislature recognized that it priced the value of a ZEC below the "social cost of carbon," which is the value to society of avoiding carbon emissions.<sup>6</sup>

The fuel diversity, resilience, air quality or other environmental benefits of nuclear generation output could be adequately valued through programs at the federal or regional

<sup>&</sup>lt;sup>5</sup> 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 (<u>https://njcleanenergy.com/files/file/rps/EY19/RPS%20Comp%20EY%202005-2019%2002192020.pdf</u>) 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).

transmission organization ("RTO") level. However, they are currently not, and the potential that federal agencies or the RTO will act in a manner that would alleviate (or even reduce) the need for ZEC payments is speculative at best. In any event, if such payments occur in the future, New Jersey consumers would be fully protected by the ZEC Act provisions against double payment arising from any such changes.<sup>7</sup>

During this application process, PSEG recognizes that the Board is reviewing not only eligibility under the ZEC Act but also whether the current ZEC charge of \$10/MWh should be reduced.<sup>8</sup> The ZEC Act provides that the Board may, in its discretion, reduce the charge if "a reduced charge will nonetheless be sufficient to achieve the State's air quality and other environmental objectives by <u>preventing the retirement of the nuclear power plants</u> that meet the eligibility criteria[.]"<sup>9</sup>

The applications for the Hope Creek and Salem Plants demonstrate that these three generating stations fully satisfy the eligibility criteria to be awarded ZECs and that they are entitled to the full ZEC award of \$10/MWh during this ZEC eligibility period. PSEG respectfully asks that the Board approve the current ZEC charge of \$10/MWh for the second eligibility period for the Hope Creek and Salem Plants.

#### I. The Potential Closure Of The Hope Creek And Salem Plants

The Hope Creek and Salem Plants provide over 3,400 MW of reliable and carbon-free energy to New Jersey. However, the plants are again applying for ZECs because the beneficial fuel diversity, resilience, air quality or other environmental benefits of its generation output

<sup>&</sup>lt;sup>7</sup> The ZEC Act ensures that ratepayers do not pay twice for the fuel diversity, resilience, air quality or other environmental benefits provided by nuclear plants by establishing an annual review of the plants that are part of the ZEC program. If a determination is made that a nuclear plant has received "double payments" for its environmental attributes, that amount would then paid back to the customer through a reduction in the number of ZECs paid to the nuclear generation unit.

<sup>&</sup>lt;sup>8</sup> <u>N.J.S.A.</u> 48:3-87.5(j)(3)(a).

<sup>&</sup>lt;sup>9</sup> Id. (emphasis added).

continue not to be otherwise valued. Efforts that could potentially provide value for these environmental attributes, such as a federal carbon-pricing program of sufficient value to drive widespread decarbonization, have been stymied thus far. PSEG has actively sought to introduce efficiencies at the Hope Creek and Salem Plants while recognizing the mandate of maintaining safe and reliable operations.<sup>10</sup> However, these efficiency gains have not been enough to continue operations without compensation for the fuel diversity, resilience, air quality or other environmental benefits of the Hope Creek and Salem Plants.

Over the past 10 years, PSEG has retired generating units representing more than 4,000 MW of installed capacity in New Jersey, and has committed to close its Connecticut coal plant in 2021. These retirement decisions, while often difficult for employees and communities, must and will be made in the normal course of business.

PSEG recognizes that the closure of the Hope Creek and Salem Plants would have a significant impact on the State and New Jersey residents. The Salem 1 Plant has over 16 years remaining on its NRC license (Hope Creek and Salem 2 have 25 years and 20 years remaining, respectively), and the New Jersey Legislature has recognized that New Jersey's air quality would be seriously degraded if the plants were to close due to "a substantial increase in emissions of several serious pollutants, and associated adverse public health and environmental impacts" that disproportionately affect "the most vulnerable citizens of New Jersey including children, the elderly, and people living in poverty."<sup>11</sup> The New Jersey Legislature's statements are confirmed by the reports of experts in the field as further described herein and in the applications regarding the environmental impacts of a potential closure of the Hope Creek and Salem Plants.

<sup>&</sup>lt;sup>10</sup> The introduction of efficiencies is limited by the restriction in the ZEC Act that provides for "no lay-offs" at these nuclear plants. <u>N.J.S.A.</u> 48:3-87.5(1).

<sup>&</sup>lt;sup>11</sup> <u>N.J.S.A.</u> 48:3-87.3(b)(1); <u>N.J.S.A.</u> 48:3-87.3 (a)(10).

The closure of the Oyster Creek nuclear plant in 2018 demonstrates the potential impact of the retirement of the Hope Creek and Salem Plants. Oyster Creek was New Jersey's smallest nuclear plant (608 MW) when it shut down permanently in October 2018. During the following year, more than two-thirds of the electricity generated to replace Oyster Creek's production came from the increased use of New Jersey's natural gas-burning power plants. The rest was supplied by out-of-state coal and natural gas facilities, which resulted in additional carbon emissions of 3.1 million tons for that year. By contrast, New Jersey's Hope Creek and Salem Plants are approximately five times larger than Oyster Creek, which would magnify the carbon emissions impact if they were to close.

# II. Requirement Of Showing Financial Need Under The ZEC Act

In order to determine eligibility, the ZEC Act requires the Board to evaluate applicants under five criteria. In addition to demonstrating a license to operate through 2030 and providing an application fee, the applicant must demonstrate that:

- "it makes a significant and material contribution to the air quality in the State by minimizing emissions that result from electricity consumed in New Jersey, it <u>minimizes harmful emissions that</u> <u>adversely affect the citizens of the State</u>, and if the nuclear power plant were to be retired, that that <u>retirement would significantly and</u> <u>negatively impact New Jersey's ability to comply with State air emissions reduction requirements</u>";
- (2) based on a specific set of financial information "the nuclear power plant is projected to not <u>fully cover its costs and risks</u>... <u>and that the nuclear power plant will cease operations within three years unless the nuclear power plant experiences a material financial change</u>"; and
- (3) it "does not receive any direct or indirect payment . . . for its fuel diversity, resilience, air quality or other environmental attributes that will eliminate the need for the nuclear power plant to retire[.]"<sup>12</sup>

<sup>&</sup>lt;sup>12</sup> <u>N.J.S.A.</u> 48:3-87.5(e)(2)-(4) (emphasis added).

The Act provides an applicant with two potential approaches to demonstrate financial need, only one of which must be used. The potential approaches are: (1) demonstrating a plant is "projected to not fully cover its costs and risks," *or* (2) demonstrating a plant is "projected to not cover its costs including its risk-adjusted cost of capital."<sup>13</sup> PSEG has chosen to demonstrate financial need based on the "costs and risks" in the first approach.<sup>14</sup>

The applications and supporting documentation demonstrate that the Hope Creek and Salem Plants fully satisfy these statutory requirements.

# III. The Hope Creek And Salem Plants Clearly Satisfy the "Financial Need" Requirement Of The ZEC Act, And PSEG Will Cease Operations Of The Hope Creek and Salem Plants Within Three Years Unless There Is A Material Financial Change<sup>15</sup>

As PSEG looks forward to the time period of the second eligibility period, June 1, 2022 through May 31, 2025, the financial outlook is increasingly challenging.<sup>16</sup> Going forward, the units face the same challenges as during the first eligibility period – forward prices for energy are lower, regulatory and compliance costs remain high, and a comprehensive carbon abatement policy remains elusive. In addition, the units face additional uncertainties and risks, including higher capacity revenue risk, because of capacity auctions that have not yet taken place along with federal policies that attempt to thwart state clean energy goals by potentially depriving state-supported units of capacity revenues.<sup>17</sup> Assessment of these risks that may or may not be realized

<sup>&</sup>lt;sup>13</sup> <u>N.J.S.A.</u> 48:3-87.5(e)(3).

<sup>&</sup>lt;sup>14</sup> The Board's April 18, 2019 Order, which granted ZECs to the Hope Creek and Salem Plants for the first eligibility period, clearly recognized that "the intent of the legislation was for the Board to consider operational risks and market risks in its evaluation of these applications." In this application and supporting documentation, PSEG has quantified those operational and market risks as defined under the statutory criteria.

<sup>&</sup>lt;sup>15</sup> The three year time period from which PSEG would cease operations would begin at the date of a denial of a ZEC award sufficient to continue operations.

<sup>&</sup>lt;sup>16</sup> PSEG does not maintain its financial statements on an individual plant basis. Accordingly, to be responsive to the questions in the application, it was necessary to create pro forma financial statements for the individual nuclear plants. <sup>17</sup> This capacity revenue risk is compounded by the fact that regulatory changes, such as the FERC Minimum Offer Price Rule ("MOPR"), add additional uncertainty around future capacity prices and the units' ability to clear the auction, beyond the uncertainty that surrounds the outcome of any capacity auction even in the absence of rule changes.

provides a picture of the financial realities that the Hope Creek and Salem Plants face.

The fact that prices for energy were significantly lower than PSEG had projected in its first application process illustrates how the financial outlook has worsened since 2018. The graph below provides a snapshot of the forward energy prices for the PECO zone showing that, in 2019, the actuals (black) were below the forwards from September 2018 (blue) by over \$7/MWh, an almost 25% differential, and 2020 appears to be an even bigger drop based on prices through August. Furthermore, the forward energy prices for 2021-2023 are about \$2/MWh lower covering the ZEC application for the second eligibility period (orange) than the forward energy prices for the ZEC application submitted for the first eligibility period (blue).





PSEG has advised its investors in its Securities Exchange Commission ("SEC") filings of the financial challenges the units face. For example, Public Service Enterprise Group's SEC 10-K filing for the year ending on December 31, 2019 stated:

> In the event that (i) the ZEC program is overturned or otherwise materially adversely modified through legal process, (ii) the terms and conditions of the subsequent period under the ZEC program,

including the amount of ZEC payments that may be awarded, materially differ from those of the current ZEC period, or (iii) any of the Salem 1, Salem 2 and Hope Creek plants is not awarded ZEC payments by the BPU and does not otherwise experience a material financial change, PSEG Power will take all necessary steps to retire all of these plants subsequent to the initial ZEC period at or prior to a scheduled refueling outage.<sup>18</sup>

When the New Jersey Legislature was considering the bill that became the ZEC Act, PSEG expressed its willingness to open its books to the Board to demonstrate financial need for ZECs. The Board has posed more than sixty questions or data requests, the majority of which relate to financial condition. PSEG has transparently and completely answered each of the questions posed by the Board, and provided the requested confidential information as to each of the three plants.

As shown in detail in responses to the questions and supporting confidential materials posed in the application, most notably in FINJ-25, the Hope Creek and Salem Plants' revenues are projected not to fully cover their costs and risks.

As further evidence of these financial challenges, PSEG's Board of Directors has closely scrutinized the financial viability of the Hope Creek and Salem Plants. PSEG is providing a certification for each of these plants, including a supporting resolution from the Board of Directors ("PSEG Board"), stating that, without a material financial change, PSEG will cease operations of the plants within three years.<sup>19</sup>

#### IV. The Hope Creek And Salem Plants Satisfy The Environmental And Fuel Diversity/Resiliency Impact Requirements

The ZEC Act expressly lists three environmental impact criteria needed to establish eligibility. An applicant must provide a "demonstration . . . that:

[(1)] [a plant] makes a <u>significant and material contribution to the</u> <u>air quality of the State by minimizing emissions</u> that result from electricity consumed in New Jersey,

<sup>&</sup>lt;sup>18</sup> Enterprise 10-K, dated Dec. 31, 2019, p. 28 (available in response to FIN-4).

<sup>&</sup>lt;sup>19</sup> See response to SSA-1.

[(2)] [a plant] <u>minimizes harmful emissions that adversely affect the citizens</u> of the State, and

[(3)] if the nuclear power plant were to be retired, that that retirement would <u>significantly and negatively impact New Jersey's ability to</u> <u>comply with State air emission reduction requirements[.]</u>"<sup>20</sup>

The Hope Creek and Salem Plants clearly satisfy each of these three criteria. First, supporting information accompanying this application includes detailed studies conducted by recognized industry experts – PA Consulting and ERM Consulting ("ERM") – showing impacts on fuel diversity, resilience, air quality or other environmental benefits that would result from the Hope Creek and Salem Plants' retirement. These studies demonstrate that the retirement of any one of the three Hope Creek and Salem Plants (and especially all three) would result in significant increases in greenhouse gas emissions and ozone levels. Second, all of these pollutants are harmful to humans, and the degradation in New Jersey air quality would exacerbate health problems that New Jersey residents experience. Moreover, because environmental impacts – particularly those impacts associated with ozone – are greatest in urban areas with larger populations of low-income residents, the loss of the Hope Creek and Salem Plants could present environmental justice issues. Third, the retirement of any of the plants would significantly hamper the ability of New Jersey to meet National Ambient Air Quality Standards ("NAAQS") for ozone and to meet carbon reduction targets under the GWRA.

#### A. New Jersey' Goals To Mitigate Against Climate Change Will Be Hindered If PSEG Ceased Operations Of The Hope Creek And Salem Plants

Climate change is one of the greatest threats facing our state and world today. In the ZEC Act, the New Jersey Legislature determined that "[r]educing emissions of carbon dioxide, and

<sup>&</sup>lt;sup>20</sup> N.J.S.A. 48:3-87.5(e)(2) (emphasis added).

other greenhouse gases . . . within and outside the State is critical to mitigating the impacts of climate change."<sup>21</sup> A failure to address CO<sub>2</sub> emissions now could have devastating impacts on future generations of New Jersey residents and New Jersey's economy.

The materials provided in PSEG's answers in the applications, including to ENV-1 and ENV-2, demonstrate the significant negative impact that the retirement of one or more of the Hope Creek and Salem Plants would have on the ability of the State to achieve reductions of CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>2</sub>, Hg, PM<sub>10</sub>, and PM<sub>2.5</sub>. For example, Figure A shows the material increases in these pollutants produced in New Jersey and in surrounding states most likely to affect air quality in the State resulting from the retirement of the Hope Creek and Salem Plants.<sup>22</sup>





Undeniably, the adverse impacts on New Jersey represent a substantial degradation of air

<sup>&</sup>lt;sup>21</sup> <u>N.J.S.A.</u> 48:3-87.3(a)(1).

<sup>&</sup>lt;sup>22</sup> PSEG Answer to ENV-1, PA Consulting, "The Impact of Nuclear Generation Retirements on Emissions and Fuel Diversity in New Jersey," at 10.

quality in the State. The impact of the retirement of the Hope Creek and Salem Plants would be significant because of the increases in  $CO_2$  (13%),  $NO_x$  (14%),  $SO_2$  (5%),  $PM_{10}$  (13%) and  $PM_{2.5}$  (14%) emissions.

ERM prepared a study showing the impact that retirement of the Hope Creek and Salem Plants would have on achieving economy-wide greenhouse gas ("GHG") reductions under the GWRA. ERM's analysis, in conjunction with PA Consulting's analysis, clearly demonstrates that the operation of PSEG's units have resulted, and are projected to continue to result in, significant, material levels of avoided GHG emissions. For example, for the five-year look forward, the retirement of the Hope Creek Plant would result in a 22-34% increase in GHG emissions above current levels from New Jersey's electric sector.<sup>23</sup> The retirement of all three plants would result in a 60-68% increase in GHG emissions above current levels from New Jersey's electric sector.<sup>24</sup>

The ERM study demonstrates that if any single plant retires (and especially all three plants), "[t]hese GHG emission increases would have significant negative impact and jeopardize the State's ability to achieve its 2050 GHG reduction goals."<sup>25</sup>

#### B. The Retirement Of Units Would Result In A Backsliding Of Ozone Levels Because Of The Increased Reliance On Fossil Generation

The ERM study shows that increases in ozone levels associated with the retirement of the Hope Creek and/or Salem Plants would exacerbate the significant challenges already faced by New Jersey in achieving the 70 ppb 8-hour ozone NAAQS across the State. As stated in the ERM study:

Additional controls will be hard for New Jersey to impose and, given this difficulty, achieving even the relatively small reductions in ozone concentrations needed for attainment will be made even more challenging by factors that increase precursor emissions, such as the

<sup>&</sup>lt;sup>23</sup> The indicated increase percentage is computed against the 2010-2019 average of about 18 MMT/year. PSEG Answer to ENV-1, ERM, "Impact of PSEG Nuclear Unit Shutdowns on Greenhouse Gas Emissions," at 19; PSEG Answer to ENV-1, data from ERM, "Impact of PSEG Nuclear Unit Shutdowns on Greenhouse Gas Emissions," at 28.
<sup>24</sup> Id.

<sup>&</sup>lt;sup>25</sup> *Id.* at 5.

<u>loss of nuclear units</u>. The NOx emissions increases projected by the PA Consulting study result from a permanent replacement of the electricity generation provided by the nuclear units at Hope Creek and Salem. <u>Any increase in emissions, and the resulting increase in ozone concentrations discussed in the [report], will make attaining the ozone NAAQS in New Jersey all the more difficult.<sup>26</sup></u>

New Jersey has already expended substantial (and expensive) efforts to significantly reduce ozone precursor emissions (i.e.,  $NO_x$  and volatile organic compounds (VOCs)) emitted in the State. Many neighboring states do not require state-of-the-art emission reduction technology necessary to minimize ozone-producing emissions. Retirement of the nuclear units, which do not emit NOx or VOC emissions, would force New Jersey to rely more on dirtier fossil fuel-fired generation that impacts ambient ozone concentrations. The retirement of carbon-free, existing nuclear resources runs counter to New Jersey's efforts to reduce regional ozone levels. The continued operation of the Hope Creek and Salem Plants is needed to prevent backsliding in the efforts to meet the ozone NAAQS.

# C. System Reliability Would Be Impacted As A Result Of The Lack Of Fuel Diversity

A significant contributor to electric system resilience is the diversification of fuels and technologies used to generate electricity. As PA Consulting aptly states, "overreliance on a single fuel or technology places the electricity system at increased risk of higher prices and more frequent and sustained outages."<sup>27</sup>

Figure B below from PA Consulting's report provides a snapshot of the increase in natural gas-fired generation in the event of a "Full Retirement Case" (that is, the retirement of the three New Jersey nuclear units). Natural gas-fired generation would comprise about 87% of generation

<sup>&</sup>lt;sup>26</sup> PSEG Answer to ENV-1, ERM, "Impacts of PSEG Nuclear Unit Shutdowns on New Jersey's Ozone Attainment Goals," at 9 (emphasis added).

<sup>&</sup>lt;sup>27</sup> PSEG Answer to ENV-1, PA Consulting, "The Impact of Nuclear Generation Retirements on Emissions and Fuel Diversity in New Jersey," at 36.

in New Jersey during the 2022 through 2025 time period, an increase of over 35% as compared to a "Base Case" reflecting the continued operation of the New Jersey nuclear units.



Figure B: New Jersey Generation (MWh) - (Across Study Period)<sup>28</sup>

Figure C below shows the material impact of the retirement of the Hope Creek Plant. Under the Hope Creek Plant retirement scenario, there is a reduction in nuclear generation in the State by over 10%, and this lost generation is replaced primarily by natural gas-fired generation.



Figure C: New Jersey Generation (MWh) - (Across Study Period)<sup>29</sup> Base Case Hope Creek Case

<sup>&</sup>lt;sup>28</sup> Id. at 38.

<sup>&</sup>lt;sup>29</sup> *Id.* at 41.

Moreover, the retirement of a nuclear plant would result in increased reliance on natural gas-fired generation imported from other states. This is demonstrated by the fact that while reliance on imported electricity has declined significantly over the past years, imported electricity increased in 2018 as a result of the closure of the Oyster Creek nuclear plant.<sup>30</sup> As a result, ERM concludes, "[T]he loss of any or all of the Hope Creek and/or Salem units would continue this trend, by substantially increasing generation and GHG emissions from [imported electricity]."<sup>31</sup>

#### V. Decommissioning Funds Are More Than Sufficient And Available Within 30 Days In The Event Of Early Retirement

The Nuclear Regulatory Commission ("NRC") requires the Decommissioning Trust Fund ("DTF") in order to give financial assurance for the costs surrounding the decommissioning of a nuclear facility. The Board's consultant's report that analyzed the ZEC applications for the first eligibility period concluded that the plants' owners, without the benefit of the DTF, would be responsible for decommissioning costs following the plant's retirement. As a result, the consultant made the determination that the costs during the years after decommissioning would be incurred by the plant despite the shutdown and, therefore, would not be "avoidable." That determination was entirely misplaced. The consultant failed to recognize that the DTF – not the plant – would pay for the costs of decommissioning. As a result, from the perspective of the plant, the cost of decommissioning is "avoidable" because access to the DTF would in fact cover all of these costs at the time the unit ceases operations. As demonstrated in PSEG's response to IUD-7, the level of funds in the decommissioning trust fund is fully consistent with expected need, and no shortfalls are anticipated in the event of early retirement. PSEG will submit all necessary documents to the NRC in advance of a premature permanent shutdown, such that it will have full access to the DTF

<sup>&</sup>lt;sup>30</sup> PSEG Answer to ENV-1, ERM Consulting, "Impact of PSEG Nuclear Unit Shutdowns on Greenhouse Gas Emissions," at 9.

<sup>&</sup>lt;sup>31</sup> Id.

within 30 days of the shutdown.

## VI. The ZEC Act Expressly Recognizes The Importance of Applicants' Confidential Financial Information And Provides Safeguards For Such Information, And PSEG Has Exercised Great Care In Adhering To The Act To Sufficiently Protect Its Confidential Information

The ZEC Act reflects the Legislature's recognition of the importance of maintaining the confidentiality of applicants' confidential information, even superseding any other law that may authorize disclosure of such information. The ZEC Act specifies that this confidential information will be made available only to "essential parties" as designated by the Board and the State Attorney General's Office.<sup>32</sup> The Board's September 29, 2020 Order made findings that only Rate Counsel and Independent Market Monitor should have this status.<sup>33</sup> Accordingly, only these parties – along with Board staff and Board consultants – will be provided the confidential information in accordance with the terms of the fully executed NDA.

Also, in conformance with the Board's directives, for Salem 1 and Salem 2, separate information as to Exelon Generation's ownership share is included as needed. In cases in which this information could be conveyed to PSEG, it has been incorporated into PSEG's Salem 1 and Salem 2 submittals for convenient reference.<sup>34</sup> In other instances, in which the Exelon Generation information was deemed to be proprietary to Exelon Generation or, the disclosure of the information to PSEG could be injurious to competition or constitute a potential violation of the

<sup>&</sup>lt;sup>32</sup> See <u>N.J.S.A.</u> 48:3-87.5(a).

<sup>&</sup>lt;sup>33</sup> Order Ruling on Motions to Intervene and Participate, Admission Pro Hac Vice, and Access to Confidential Information, BPU Docket No. ER20080557, at 13 (Sept. 29, 2020); Order Ruling on Motions to Intervene and Participate, Admission Pro Hac Vice, and Access to Confidential Information, BPU Docket No. ER20080558, at 13 (Sept. 29, 2020); Order Ruling on Motions to Intervene and Participate, Admission Pro Hac Vice, and Access to Confidential Information, BPU Docket No. ER20080559, at 13 (Sept. 29, 2020).

<sup>&</sup>lt;sup>34</sup> The information provided included confidential/market sensitive information in a few cases needed to fully answer certain questions. When this occurred, precautions were taken to assure compliance with anti-manipulation rules or potential anti-trust restrictions. Sensitive information regarding Exelon Generation's forecasts or bidding practices was not supplied to PSEG.

antitrust laws, Exelon Generation is submitting the information separately. All parties that receive confidential Exelon Generation information, and confidential PSEG information that the companies are providing separately, should take care in any correspondence or other interactions with each company not to inadvertently disclose confidential information to the other co-owner, i.e., do not disclose the confidential PSEG information to Exelon Generation or the confidential Exelon Generation information to PSEG.

## VII. PSEG And Exelon Generation Have Submitted Thorough, Detailed Responses That Will Enable The Board To Undertake A Comprehensive And Complete Review Prior To Issuance Of Any ZECs

The extensive set of application materials submitted by PSEG and Exelon Generation are fully and transparently responsive to the questions posed and materials requested by the Board in its August 12, 2020 Order. PSEG understands that the Board's staff and consultants, along with the intervenors and those who have been granted participation status, will undertake a thorough review of the submitted materials and will probe the presentations made in the filings. PSEG welcomes the additional transparency in the process for the second eligibility period with respect to the opportunities to engage in evidentiary hearings and comment on preliminary findings.

## VIII. The Applications For Hope Creek, Salem 1 And Salem 2 Are Interdependent

The applications for all three plants are interdependent upon one another. The PSEG Board undertook a review of the outlook of the plants in September of 2020. At that time, the PSEG Board authorized management to file these applications for ZECs for the three nuclear plants. Finally, PSEG management and Board concluded that, absent a separate material financial change, the plants will cease operations within three years unless all three plants receive ZECs that adequately compensate the plants for their costs and risks.

Very truly yours,

Bracell pan\_\_\_\_

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cc: Service List