

PSEG Aims to Preserve New Jersey's Largest Source of Carbon-Free Electricity Announcement Addendum, October 1, 2020

The following information is provided in support of <u>PSEG's announcement</u> on Oct. 1, 2020: *PSEG Submits Application for Zero Emission Certificates to Continue to Preserve New Jersey's Largest Source of Carbon-Free Electricity – Nuclear Energy is Critical to New Jersey's Energy Master Plan and Long-Term Clean Energy Goals.*

NJ Energy Master Plan Recognizes Value of Nuclear Energy

The goals of New Jersey's ZEC Act are supported by the BPU's 2019 Energy Master Plan Pathway to 2050, which details Gov. Phil Murphy's goal of 100% clean energy by 2050 and the Global Warming Response Act goal to reduce economy-wide state greenhouse gas emissions 80% below 2006 levels by 2050. The Energy Master Plan acknowledges that, without the continued presence of nuclear power, New Jersey's goal of 100% clean energy by 2050 cannot be achieved without exorbitant cost.

Preserving New Jersey's existing nuclear fleet is considerably less expensive than the cost of subsidizing other carbon-free energy resources. For example, the state is paying more than 20 times the \$10/MWh cost of ZECs for solar generation and more than four times the cost of ZECs for offshore wind generation. Nuclear provides the same carbon-free benefits from a more reliable baseload source at a fraction of the cost. While investing in offshore wind and solar as alternatives to carbon-emitting power plants has value, spending to replace well-operated, non-carbon-emitting nuclear plants would needlessly cost New Jersey energy consumers billions of dollars.

Study 1: Preserving Nuclear Plants Avoids 60-68% Increase in GHG Emissions

In September 2020, <u>ERM</u>, a leading sustainability consultant, prepared a study showing the impact that retirement of the plants would have on achieving economy-wide GHG reductions under New Jersey's Global Warming Response Act. ERM's analyses, in conjunction with analyses conducted by PA Consulting, demonstrate that the operation of the PSEG Nuclear units has resulted, and are projected to continue to result, in significant, material levels of avoided GHG emissions. For example, the avoided GHG emissions from the retirement of the three New Jersey nuclear plants reflect a 60% to 68% increase in GHG emissions above current levels from New Jersey's electric sector.

Study 2: Nuclear Critical to NJ's Least-Expensive Path to Low-Carbon Future

In a January 2020 report, New Jersey Charts a Practical, Affordable Course to a Decarbonized Economy, from the Rocky Mountain Institute, six possible decarbonization pathways for New Jersey were analyzed and each scenario – including the least-cost scenario – included New Jersey's nuclear plants operating through the end of their permits (year 2036 at the earliest). In fact, five of the six scenarios assumed the plants would continue to operate through 2050. In the sixth scenario, in which the plants were closed at their current license, the costs to achieve New Jersey's 2050 carbon-reduction targets were billions of dollars per year higher.

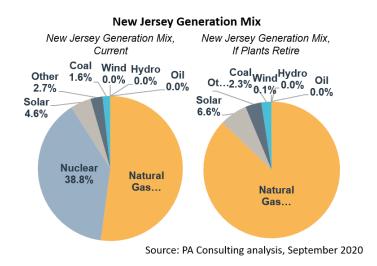
RMI: New Jersey electricity generation mix and load, as analyzed in the least-cost decarbonization pathway.

NJ ELECTRICITY GENERATION & IMPORTS (TWh) PJM SOLAR 150 NJ LOAD 100 OFFSHORE WIND 50 **FOSSIL GAS** BIO **FUELS** NUCLEAR 2020 2025 2030 2035 2040 2045 2050

Electricity Generation - Least Cost Scenario

Environmental, Climate Benefits at Risk

PSEG's nuclear plants deliver nearly 40% of New Jersey's electricity and more than 90% of its carbon-free generation. If the state's nuclear plants were allowed to close, the lost nuclear generation would be replaced almost entirely by electricity imported from elsewhere in PJM and neighboring states, primarily natural gas- and coal-fired power plants, as well as increased natural gas-fired generation within New Jersey (figure below).





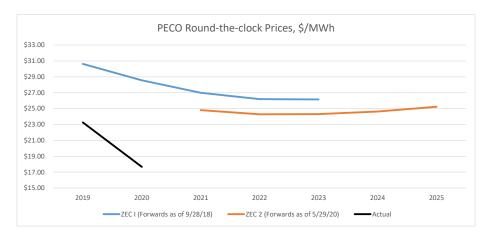
In 2018, the New Jersey Legislature recognized that the loss of nuclear power plants relied upon by the state would have "an immediate increase in air emissions within New Jersey" and enacted the ZECs legislation. Without the nuclear plants, New Jersey's air quality would be seriously degraded due to "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."

Why New Jersey's Nuclear Plants Need ZECs

Since the ZEC applications for the first eligibility period were filed in December 2018, energy market conditions have worsened and the financial needs of the nuclear plants have grown significantly. Once again, revenues are predicted not to cover the costs and risks of running the plants.

PSEG has introduced efficiencies at the plants while recognizing the mandate of maintaining safe and reliable operations. However, these efficiency gains have not been enough to offset the decline in revenues caused by lower-than-predicted market prices.

The graph below provides a snapshot of the forward energy prices for the PECO Zone that had been anticipated at the time of the ZEC application for the first eligibility period (blue) compared to the actual energy prices (black), with actual energy prices coming in at a fraction of what markets expected.



The financial outlook facing the nuclear plants for this next three-year period appears increasingly challenging.

New Jersey's nuclear plants face the same challenges today as they did during the first eligibility period – forward prices for energy remain low and regulatory and compliance costs remain high. As we approach a new eligibility period, the units face additional uncertainties and risks, including capacity auctions that have not yet taken place and federal policies that attempt to thwart state clean energy goals.

Consumer Protections in Place

The ZEC Act provides numerous protections to customers in situations where that need is abated. One such protection is that the ZEC Act requires each plant to certify annually that it receives no other payments for its fuel diversity, resilience, air quality or other environmental attributes. If a plant receives any other financial relief, the statute requires ZEC payments to be reduced to avoid any double payments.



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Forward-Looking Statement

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