February 12, 2021

Via Electronic Mail

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Clean Air Task Force
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Re: In the Matter of the Applications of PSEG Nuclear, LLC And Exelon Generation Company, LLC For The Zero Emission Certificate Program – Salem Unit 1, Salem Unit 2, and Hope Creek; Docket Nos. ER20080557, ER20080558, ER20080559.

Dear Commissioners,

The Clean Air Task Force ("CATF") respectfully submits the following comments on the above units' applications for Zero Emission Certificates ("ZECs"). CATF is a nonprofit, nonpartisan, environmental organization dedicated to supporting technical, legal, and policy solutions to air quality and climate change problems. We have worked for over two decades with national and regional environmental and public health organizations, including in New Jersey, to promote state and federal policies to curb harmful air and climate emissions from power plants. CATF has also filed a brief as *amicus curiae* in the currently-pending case regarding these ZEC approvals, which we have submitted alongside these comments.[1]

The purpose of the ZEC program is both to help address New Jersey's climate goals and to help avoid "a substantial increase in emissions of several serious pollutants, and [their] associated adverse public health and environmental impacts" should existing nuclear units prematurely retire.[2] Those mutually compatible goals are reflected in the environmental criteria in the ZEC statute, such as the requirement that an eligible plant must "minimize[] harmful emissions that adversely affect the citizens of the State."[3]

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[1] Brief of *Amicus Curiae*, Clean Air Task Force, In the Matter of the Implementation of L. 2018, C. 16 Regarding the Establishment of a Zero Emission Certificate Program for Eligible Nuclear Plants, N.J. Super. Ct. App. Div. No. A-003939-18.

[2] N.J.S.A. 48:3-87.3(a).

[3] N.J.S.A. 48.3-87.5(e)(2).

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The nuclear units being considered for ZEC renewal in these proceedings are critical for New Jersey to achieve its clean air and climate targets, including 80% reduced emissions as well as 100% clean energy by 2050.[4] In 2020, these units provided 94% of New Jersey's zero-carbon electricity, and 43% of all electricity in the state.[5] Without them, it will be much more difficult to meet these targets, as any lost generation would need to be replaced with other energy production. The majority of that replacement generation is likely to be from fossil-fuel fired power plants located both within and upwind of New Jersey. As noted by the preliminary eligibility reports, more than 67% of the nuclear replacement generation would be from natural gas and coal generating plants in the region,[6] leading to significant increases in CO_2, NO_x, and particulate matter of over 13 percent, as well as increased SO_2 and mercury emissions.[7] Additionally, the full retirement scenario would result in significant emissions increases in these pollutants across the region, in Pennsylvania, Delaware, and Maryland, in the range of 3 to 7 percent.[8] These conclusions have been echoed by the New Jersey DEP, which found that closing the nuclear plants would result in increases in not only greenhouse gases, but also in NO_x, SO_2, particulates, and hazardous air pollutants.[9]

These increases in pollution are problematic for public health, generally, and NO_x emissions are a particular problem for New Jersey. NO_x is a precursor to ground-level ozone smog,[10] and every county in New Jersey is currently in nonattainment of the National Ambient Air Quality Standard ("NAAQS") for

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[4] *See* 2019 New Jersey Energy Master Plan 39–55 (Section 5); *see also id.* at 257 (Least Cost Scenario to meet 2050 emission reduction goals relies on the nuclear fleet remaining active through the end of permits and potentially beyond).

[5] *See* U.S. Energy Information Administration, Detailed State Data, Monthly data from Electric Power Monthly, Net Generation by Type of Producer by Energy Source, https://www.eia.gov/electricity/data/state/. Data from January to November 2020.

[6] Levitan & Associates, Preliminary Salem 1 Eligibility Report at 10 n.14.

[7] Levitan & Associates, Preliminary Salem 1 Eligibility Report, at 12.

[8] PA Group, The Impact of Nuclear Generation Retirements on Emissions and Fuel Diversity in New Jersey at 9 (Dec. 2018) (fig. 1-2).

[9] New Jersey DEP, Memorandum re: NJDEP Review of PSEG's Zero Emission Credit Applications (Apr. 4, 2019).

[10] *See* Air Emissions and Electricity Generation at U.S. Power Plants, GAO-12-545R (April 2012) at 20-23, available at www.gao.gov/assets/600/590188.pdf.

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ozone.[11] Ozone forms when NO_x reacts with volatile organic compounds in the presence of sunlight, and smog formation commonly occurs many tens to hundreds of miles downwind of the source of the precursor pollution.[12] Ozone levels in New Jersey, therefore, can be expected to increase if one or more of the nuclear units retires, both due to increased emissions from fossil fuel-fired power plants located in New Jersey itself, but also due to increased fossil-fueled emissions from upwind states.

Higher ozone levels in New Jersey pose a serious public health threat. Exposure to ozone at any concentration, but particularly at concentrations above the ozone NAAQS, can impair lung function, aggravate respiratory illnesses, increase cardiovascular risks, and is also linked to premature death.[13] Because every county in New Jersey is currently in nonattainment of the ozone NAAQS, any increases in NO_x due to New Jersey nuclear plant retirement—and the resulting need to run upwind fossil fuel-fired power plants—would make it even harder for New Jersey to meet its targets under the current ozone NAAQS, never mind what the result would be if the ozone standard were tightened, as current public health science suggests it should be.[14]

Just as additional upwind emissions will make it more difficult to achieve the NAAQS in New Jersey, additional air pollution emissions from power plant sources in New Jersey will cause additional difficulty in meeting the NAAQS in states downwind of New Jersey, including New York and Connecticut.

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[11] Twelve counties in northern New Jersey are part of the New York-New Jersey-Connecticut Metropolitan Area ("NYMA") ozone nonattainment region. 40 C.F.R. § 81.331. NYMA is currently in nonattainment for both the 2008 ozone standard, set at 75 parts per billion, and the 2015 ozone standard of 70 parts per billion. *Id.* The remaining nine New Jersey counties are part of the Philadelphia-Wilmington-Atlantic City Area, which also is not attaining either the 2008 or the 2015 ozone standard. *Id.*

[12] *See* Cross-State Air Pollution Rule for the 2008 Ozone NAAQS, 81 Fed. Reg. 74,504, 74,585 (Oct. 26, 2016).

[13] See U.S. Environmental Protection Agency, Integrated Science Assessment of Ozone and Related Photochemical Oxidants (Final Report), EPA/600/R-10/076F (2013).

[14] *See* Clean Air Scientific Advisory Committee, *CASAC Review of the EPA's Policy Assessment for the Review of the National Ambient Air Quality Standards for Ozone* (External Review Draft – October 2019) (EPA-CASAC-20-003) (Dec. 16, 2019).

That means New Jersey will have to look to other sources of emissions if it is to satisfy its good neighbor obligations to them under the Clean Air Act.[15]

Both the impacts on air quality within New Jersey and downwind of the state contribute to the impact of any closures on "New Jersey's ability to comply with state air emissions reduction requirements," one of the standards for ZECs under the statute.[16]

While CATF does not take a position on the financial criteria associated with these applications, it is our strongly held view that the continued operation of these units is critical, both for their contribution to meeting climate targets, and for air quality both in New Jersey and the surrounding region.

Respectfully submitted,

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[15] *See, e.g.*, Maryland v. EPA, 958 F.3d 1185, 1207 (D.C. Cir. 2020) (remand of portion of Maryland 126 petition regarding the claim that generating units that did not have catalytic controls should be required to operate their non-catalytic controls); Clean Air Act § 110(a)(2)(D), 42 U.S.C. § 7410(a)(2)(D). While the emissions reductions do not have to come from the power sector, U.S. EPA has repeatedly pointed to the electric generating sector as the most cost-effective source of such emissions reductions.

[16] N.J. Stat. § 48:3-87.3(e)(2).