

VIA ELECTRONIC MAIL
The Energy Master Plan Committee
New Jersey Board of Public Utilities
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September 16, 2019

Re: Comments on the Draft New Jersey 2019 Energy Master Plan

Exelon Generation Company, LLC (“ExGen”) appreciates the opportunity to provide comments in response to the Board of Public Utilities’ (“BPU”) request for comments on the 2019 New Jersey Draft Energy Master Plan (“EMP” or “2019 EMP”). As background, ExGen owns over 32,000 megawatts (“MW”) of generation, including nuclear, fossil, hydroelectric, solar, landfill gas, and wind generation assets. In addition, ExGen markets wholesale energy and capacity products to municipal, cooperative, and investor-owned utilities, retail suppliers, retail energy aggregators, merchant participants, power marketers, and major commodity trading houses. ExGen is also a major supplier of electricity to New Jersey consumers at retail through its Constellation business. Constellation serves residential, commercial and industrial customers as well as municipal aggregation programs throughout the State and has developed 35.4 MW of installed solar on behalf of its customers in New Jersey. Based upon its experience in New Jersey and elsewhere, ExGen submits the following comments to aid in the development of the EMP.

ExGen appreciates the Administration’s vision as described in the EMP, including the expansion of programs to foster the use of all carbon-free energy resources such as nuclear, renewables, energy efficiency and energy storage to combat climate change. The expansion of carbon-free energy resources provides tremendous energy, clean air, health, and economic benefits to all residents and businesses in New Jersey. To reach the deep decarbonization goals outlined in the EMP, New Jersey must recognize that all carbon-free resources provide valuable contributions to environmental goals. Over the long-term, this will in turn maximize the full benefits of electrifying the transportation, building, and industrial sectors in the most cost-effective manner.

Definition of Clean Energy Must Include Nuclear Generation To Achieve Carbon Reductions

The EMP defines “100% Clean Energy by 2050” to mean 100% carbon-neutral electricity generation and maximum electrification of the transportation and building sectors to meet or exceed the Global Warming Response Act (GWRA) emissions reductions by 2050. ExGen concurs with the definition of “100% Clean Energy by 2050” contained in the EMP. In short, to reach Governor Murphy’s goal of 100% clean energy usage in New Jersey by 2050, the definition must continue to include all zero-carbon resources, including nuclear.

Climate change is upon us and requires bold action, now. Its impact grows year after year, damaging our environment, harming our health, threatening the economy, and increasing national security risks. Two things will matter as New Jersey and other states continue the fight against climate change. First, growing, not reducing, the total zero-carbon energy production to shift away from fossil fuels in the most cost-effective manner. Second, facilitating that shift in the most expeditious way possible. It is with this urgency that we encourage New Jersey to remain focused on recognizing nuclear for its carbon-free attributes.

While embracing this climate challenge and identifying the least-cost pathways to a clean energy future, New Jersey should stay committed to supporting its existing clean energy jobs while also facilitating the creation of new clean energy opportunities. Undoubtedly, nuclear generation and its world class workforce have a critical role to play in achieving New Jersey’s decarbonization goals affordably. In its 2017 report¹, The Brattle Group evaluated the contribution that the Salem and Hope Creek nuclear power plants in New Jersey make to the state’s economy. Brattle considered how these plants affect electricity markets and prices, as well as in-state production activity and studied the ramifications of these factors throughout the New Jersey’s economy. Brattle’s analysis showed that during the ten-year period spanning 2018–2027, the Salem and Hope Creek plants operating in New Jersey will:

- Contribute approximately \$809 million annually to state gross domestic product (GDP);
- Account for 5,800 in-state jobs (direct and secondary);

¹ The Brattle Group, “*Salem and Hope Creek Nuclear Power Plants’ Contribution to the New Jersey Economy*” (November 2017). Full report at https://brattlefiles.blob.core.windows.net/files/13065_11755_salem_and_hope_creek_nuclear_power_plants_contribution_to_the_new_jersey_economy1.pdf

- Help keep electricity prices low - New Jersey consumers would pay \$400 million more for electricity annually, about \$3.3 billion more in present value over the next ten years, without these two plants;
- Fund \$37 million in state tax revenues annually;
- Avoid 13.8 million metric tons of CO₂ emissions annually over the next ten years, valued at \$585 million per year; and
- Avoid significant amounts of other air pollutants annually, valued at \$148 million per year.

Brattle’s findings have been echoed by others, only emphasizing the need to include these facilities in carbon reduction strategies. In a new report² released last November, the Union of Concerned Scientists (UCS), a national, science-based environmental nonprofit, joined a growing number of environmental thought leaders in supporting existing nuclear power because of its carbon reduction benefits. The UCS report found that more than one-third of America’s nuclear plants will or could be shuttered within the next decade, before their government licenses expire, and that such plants would be replaced by increased generation from existing or new natural gas or coal. The possibility that the nation will replace existing nuclear plants with existing or new fossil generation rather than new, low- or zero-carbon resources raises serious concerns about our ability to achieve the deep cuts in carbon emissions needed to limit the worst impacts of climate change.

If New Jersey and other states with nuclear generation assets choose to limit their definition of clean energy to exclude nuclear and fail to recognize their carbon reduction value, virtually all of the growth in renewable power will be for naught and generation investments and time, our most precious asset, will be lost. New Jersey is all too familiar with the consequences of climate change - extreme weather and rising sea levels chief among them. As we have stated previously, it is imperative that the EMP continues to acknowledge that the operating characteristics and environmental attributes of nuclear are unique among electricity generation technologies and offer an undeniable edge to New Jersey as it endeavors to achieve significant carbon reduction goals.

² Union of Concerned Scientists, “The Nuclear Power Dilemma” (November 2018). Full report at <https://www.ucsusa.org/nuclear-power/cost-nuclear-power/retirements>

Nuclear is Foundational to a Decarbonized, Reliable, Diverse, and Affordable Energy Future

ExGen acknowledges the important work to date by Governor Murphy and the New Jersey legislature to propel the state into a clean, de-carbonized energy future. The 2019 EMP provides an excellent overview of the Administration’s vision of how to accomplish these deep decarbonization goals. The EMP has a significantly wider scope than prior plans, outlining seven distinct strategies to achieve 100% clean energy and 80% emissions reductions from 2006 levels by 2050. With respect to electricity generation, the Murphy Administration’s energy commitments to date include:

- Increasing the Renewable Portfolio Standard to 50% by 2030
- Generating 3,500 MW of offshore wind by 2030
- Installing 2,000 MW of energy storage by 2030
- Transitioning to a new solar incentive program
- Developing a community solar program that allows more state residents to benefit from solar energy, especially low- and moderate-income (LMI) families

Exelon looks forward to working with policymakers and stakeholders to develop additional policies that would help optimize New Jersey’s clean energy future in an affordable manner. With electricity generation in New Jersey producing one fifth of the state’s net greenhouse gas emissions, along with other air pollutants such as NO_x, SO_x, and particulate matter, planning for a decarbonized, reliable, diverse generation mix becomes imperative. Of course, the importance of existing nuclear recourses only increases as decarbonizing efforts advance beyond the generation sector. Based on a year-long collaboration with leading companies including Microsoft and Mars Inc., the Center for Climate and Energy Solutions (C2ES) outlines alternative scenarios for decarbonizing the U.S. economy. In its May 2019 report³, C2ES identifies three scenarios that take a technology-neutral approach, demonstrating that nuclear energy has a key role to play in achieving 80 percent decarbonization. Similar reports have been published by MIT⁴ and Third Way⁵.

³ C2ES, “Pathways to 2050: Alternative Scenarios for Decarbonizing the U.S. Economy” (May 2019). Full report at <https://www.c2es.org/document/pathways-to-2050-scenarios-for-decarbonizing-the-u-s-economy/>

⁴ Full report at <http://ceepr.mit.edu/files/papers/2017-009.pdf>

⁵ Full report at <https://www.thirdway.org/memo/nuclear-closures-undo-years-worth-of-climate-progress>

In the absence of a nation-wide program to price carbon emissions, states, including New Jersey, have taken the lead in adopting ambitious decarbonization policies. Although states have historically relied on renewable portfolio standards, an increasing number are now turning to technology-neutral policies to ensure that new clean generation does not displace existing clean generation. Six states – California, Colorado, New Mexico, New York, Nevada, and Washington – have adopted 100% clean energy standards in an effort to aggressively decarbonize their electric sectors, and governors across the country are calling on their states to follow suit.

In 2018, more than half of New Jersey’s electricity was generated by natural gas power plants. Electricity generated from these plants represents nearly all the state’s electricity sector greenhouse gas emissions. In contrast, nuclear and other renewable energy produce zero greenhouse gas emissions or other criteria air pollutants. During last year, nuclear power sources, accounted for over 40 percent of the total power generated in the state while renewable energy generation represented only about 5 percent of the mix. Following the closing of Oyster Creek, New Jersey’s oldest nuclear plant, the state lost over 600 megawatts (MW) of zero-emission generation capacity and as a result the state’s share of electricity from nuclear, its largest source of carbon-free generation, dropped by 10%.

Conclusion

At a July 24, 2019 Energy Commerce Committee hearing, World Resources Institute’s Senior Fellow Karl Hausker said “[i]t’s risky to ‘bet the climate’ on any single set of technologies. The United States should greatly expand its zero-carbon generation now with low-cost wind and solar, while aggressively investing in research, development, and demonstration of a broad portfolio of zero-carbon electricity options, given the many uncertainties related to the evolution of any single technology.” ExGen agrees that the strategic planning for a decarbonized, reliable, diverse, and affordable generation mix must be inclusive of all existing and emerging zero-emission technologies. This is particularly true as New Jersey expands its efforts to include other sectors of the economy. In the case of New Jersey, the state’s existing nuclear facilities are an invaluable, carbon-neutral asset in the state’s future portfolio of clean electricity options and, thus, should remain an integral part of the state’s visionary EMP.

ExGen appreciates the opportunity to comment on the EMP and looks forward to working with the Governor, the BPU, and the participating New Jersey State agencies to move toward a decarbonized, clean energy future.

Respectfully,

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