New York State

Energy Research and Development Authority

INITIAL COMMENTS OF THE NEW YORK POWER AUTHORITY ON DRAFT BLUEPRINT ON THE CONSIDERATION OF ADVANCED NUCLEAR TECHNOLOGIES

On September 5, 2024, the State of New York (the State) convened State, federal, industry and academic experts in the Future Energy Economy Summit to discuss the role of next generation clean energy technologies and strategies to accelerate renewable energy deployment while supporting economic development. Following the summit, NYSERDA issued its Draft Blueprint for Consideration of Advanced Nuclear Technologies (Draft Blueprint), prepared by the Brattle Group. The New York Power Authority (NYPA) appreciates that NYSERDA is using the Draft Blueprint to facilitate a public and transparent discussion regarding the potential inclusion and deployment of advanced nuclear technologies in the State electric generation resource mix.

NYPA submits these comments in response to the Draft Blueprint and has four points for consideration. First, the State should consider advanced nuclear generation technologies and other available technologies that could be deployed to assist achieving the Climate Leadership and Community Protection Act (CLCPA) goals. Second, should New York decide to pursue advanced nuclear power generation or other new zero-emission generation technologies, NYPA has a history of building and operating nuclear power plants and other new generation

technologies safely and reliably. The Power Authority stands ready to lend its expertise to help meet the State's need for carbon-free electric generation capacity and energy. Third, if New York decides to promote advanced nuclear technologies, the State should harmonize its siting and permitting rules and regulations with the nuclear siting and permitting regulations of the Nuclear Regulatory Commission (NRC). Fourth, a clear set of policies and regulations regarding advance nuclear generation technologies would assist developers to determine whether to invest in new power generation in New York State.

BACKGROUND

The CLCPA directs the Public Service Commission (Commission) to require all statewide electricity to be "zero emissions" by 2040 and for New York State to have a completely carbon neutral energy economy by 2050.[1] Although the Commission has not formally defined "zero emissions," it has recognized that nuclear projects are zero-carbon electric generating facilities that have zero-emissions technology.[2] In the 2016 ZEC Order, the Commission recognized a need to financially support existing at-risk nuclear resources in order to retain their zero-emissions attributes to help New York State achieve the greenhouse gas emission targets of the Climate Act.[3]

While the State is providing support for new renewables and existing nuclear resources, studies indicate that the State will need additional clean electric generation resources to reach its emissions goals. In July 2024, the NYISO issued the 2023-2042 System and Resource Outlook

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1 Chapter 106 of the Laws of 2019. See Public Service Law (PSL) § 66-p(2).

2 Case 15-E-0302, Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order Adopting a Clean Energy Standard, (issued August 1, 2016) (2016 ZEC Order) p.19.

3 Id. at 2.

Report (the Outlook), which stated that at least 20 GW, and upwards of 40 GW, of dispatchable emission-free resources (DEFRs) would be required to meet the CLCPA goal of a zero emissions grid by 2040.[4]

In September 2024, the Future Energy Economy Summit explored how the State can accelerate the deployment of dispatchable emissions-free resources necessary to meet CLCPA targets. The Draft Blueprint issued thereafter offers the opportunity for the public to participate at the inception of considering the role advanced nuclear technologies and other zero-emission power technologies as part of the electric generation fleet in New York.

COMMENTS

I. The State Should Consider Implementing Advanced Nuclear Generation Technologies and Other Available Zero-Emission Technologies to Help Achieve CLCPA Goals

The Draft Blueprint affirms that past studies all point to the need for DEFRs that can reliably meet New York's growing demand for electricity. DEFRs include technologies we have available today, such as NYPA's flexible hydroelectric facilities that balance intermittent generation including solar and wind, as well as other zero-emission technologies that are being tested for commercialization, such as small modular nuclear reactors and other advanced nuclear generation technologies, or new technologies that are in research and development. The Draft Blueprint states that it is unlikely a single technology will emerge that will meet all the critical energy needs of the State and align with CLCPA goals.[5] As a result, the Draft Blueprint infers

[4] NYISO 2023-2042 System & Resource Outlook (July 23, 2024), p. 48, https://www.nyiso.com/documents/20142/46037414/2023-2042-System-Resource-Outlook.pdf/8fb9d37a-dfac-a1a8-8b3f-63fbf4ef6167.

[5] 2024, Draft Blueprint, p. 2.

that a diverse mix of technologies is needed to advance power system reliability and New York's increasing load needs.

NYPA agrees that all zero-emission technologies, including advanced nuclear power generation, should be thoroughly reviewed and considered by the State when looking at long-term assessments of resource adequacy and projected electric system needs. NYPA supports the examination of advanced nuclear generation technologies in the State's resource mix to meet electric power system reliability needs and the greenhouse gas emission targets in the Climate Act and other public policy objectives. NYPA looks forward to participating in a robust, public, and transparent review of all zero-emission technologies available for consideration to help the State reach its public policy goals and maintain reliability.

II. Should New York State Decide to Pursue Advance Nuclear or Other Zero Emission Power Generation Technologies, the Power Authority Stands Ready to Assist

The Power Authority has a long history of building and operating nuclear power generation facilities safely and reliably in New York State. In 1969, NYPA began construction of the James A. FitzPatrick Nuclear Power Plant (820,000 kw) on the shores of Lake Ontario, near Oswego, New York, and in 1975, the Power Authority acquired Indian Point 3 from Consolidated Edison Company of New York. NYPA operated these nuclear power plants to meet New York's power needs until it sold these assets in 2000. NYPA's statutory mission continues to include the development and maintenance of baseload power plants, nuclear power generation facilities, or facilities utilizing new energy technologies. *See, e.g.,* Pub. Auth. L. §§ 1001, 1005 (second, third, sixth undesignated paragraphs), 1005(3), (6), (7), (10) and (15). NYPA also has a history of supporting the development of new generation technologies, such as its hydrogen generation pilot project and its AGILe laboratory. Should the State decide to undertake advanced nuclear

generation technologies, such as small modular nuclear reactors, or other zero emission power generation technologies, NYPA stands ready to lends it expertise to the safe and reliable development and operation of facilities to meet New York's future carbon-free power generation needs.

III. Any Public Policy or State Regulations on Advanced Nuclear Technologies Should be Harmonized with Nuclear Regulatory Commission's Regulations

The NRC was established under the provisions of the Energy Reorganization Act of 1974 to ensure the safe use of radioactive materials for beneficial civilian purposes. Their jurisdiction covers three main areas: reactors, materials, and waste.

The NRC has robust and transparent regulatory and oversight processes, which are broken into five components: i. regulations and guidance; ii. licensing, decommissioning, and certification; iii. oversight; iv. operation experience; and v. support for decisions.[6] For example, the NRC licensing process has clear stages of development with an identified timeline for milestones and public involvement. One question posed by the Draft Blueprint is how the State can adopt and improve best practices in nuclear safety. Currently, the NRC conducts inspections to ensure that licensees meet NRC's regulatory standards. For operating reactors, routine inspections are implemented on a quarterly basis and NRC is transparent in their findings. Each reactor has its quarterly plant summary, performance indicators, inspection findings, and inspection reports available to the public on their website.

[6] Nuclear Regulatory Commission, Website on Regulatory Processes, https://www.nrc.gov/about-nrc/regulatory.html

Should the State continue investigating whether to incorporate advanced nuclear generation technologies into the resource mix, NYPA recommends the State draw from the current regulatory processes and regulations of the NRC when developing State regulations. The guidelines and standards defined by the NRC would be a suitable example of best practices for the State to follow.

NYPA is also aware of the robust NRC stakeholder engagement processes. Their third Strategic Goal is to "inspire stakeholder confidence in the NRC" with the two major objectives. The first is to include stakeholders in activities in an "effective and transparent manner" while the second is to keep the decisions making process data driven while ensuring information is available and accessible to interested stakeholders.[7] As explained above, the NRC practices transparency in the inspection findings of all nuclear reactors. The NRC also runs a generic communications program, where information can be shared to licensees and interested stakeholders through means such as bulletins, regulatory issue summaries, and informational notices. The NRC not only involves the public through its regulatory processes, but also appoints Regional State Liaison Offices for each state which serves as a point of contact with the NRC.

NYPA recommends the State coordinate with the NRC early in this discussion process to best determine how to establish additional state and federal siting, licensing, and permitting processes that harmonize federal and state requirements, and provide for public participation and transparency. Increased coordination and engagement with the NRC combined with the State's desire to site, construct, and operate such projects would be beneficial not only to developers, but the public and the environment as well.

[7] Nuclear Regulatory Commission, Website Page on Strategic Goal 3, https://www.nrc.gov/about-nrc/plans-performance/strategic-planning/stakeholder-confidence-strategic-goal.html

IV. The State Should Set Forth Clear Policies and Regulations Following a Decision to Promote Advanced Nuclear Deployment in New York

Following passage of the CLCPA, the State established decisive programs to stimulate development of renewable generation and transmission, the elimination of emissions, and bolstering residential adoption of clean energy initiatives. The State has continuously improved programs like the Renewable Energy Credit program, NY Sun – Solar program, and the Municipal Zero-emission Vehicle program. All these programs were created, and subsequentially improved upon, through active participation of relevant state agencies, the public, and developers.

With the enactment of the CLCPA, the State created regulations and programs that identified the State's intent in the achievement of its energy policy goals. These programs convey a clear message to developers who, through regulation, understand what investments are encouraged in New York. Sending this decisive message helped bolster interest in developing energy projects in the State. In 2019, there were 275 projects in the interconnection queue. The NYISO 2024 Power Trends reports there are now over 500 projects in the NYISO process.[8]

One recommendation to provide a strong signal to developers would be to create an incentive for flexible resources, such as a new renewable energy certificate (REC) or a Flex REC. NYPA proposed initiating a Flex REC in response to the recent Draft Clean Energy Standard Biennial Review.[9] If the State were interested in developing a price signal to develop advanced nuclear technologies in New York, it could stablish a Flex REC and include nuclear technologies within its definition of flexible resources eligible for the credit.

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[8] 2024 Power Trends, the NYISO Annual Grid and Markets Report, pg. 13.

[9] Case 15-E-0302, Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Draft Clean Energy Standard Biennial Review (filed July 1, 2024); see also, Comments of the New York Power Authority on the Draft Clean Energy Standard Biennial Review (filed Sept. 23, 2024).

The consideration of advanced nuclear technologies is in the early stages. It is likely that discussions to consider these technologies will require time and active stakeholder engagement. Should the State decide to incorporate advanced nuclear technologies into its resource mix, NYPA recommends that New York develop clear policies and regulations to help developers determine whether they should invest in new power generation in New York State.

CONCLUSION

NYPA appreciates the opportunity to provide these initial comments on the Draft Blueprint on the Consideration of Advanced Nuclear Technologies and looks forward to the opportunity to work with NYSERDA and other stakeholders in its potential advancement.

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Respectfully submitted,

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