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Assemblyman 132nd District
Chemung, Schuyler, Seneca,
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November 8, 2024

Doreen Harris, President & CEO
New York State Energy and Research
Development Authority (NYSERDA)
17 Columbia Circle
Albany, NY 12203-6399

Dear President Harris:

I'm writing to express my strong support for the New York State Energy Research and Development Authority's Advanced Nuclear Technology Blueprint. This proposed roadmap is essential to the energy future of New York and enhancing the welfare of our residents. Nuclear energy is one of the greatest assets this State possesses and offers numerous advantages over wind and solar generation in virtually all respects. I encourage you to consider the following benefits of nuclear power:

- Making advanced nuclear energy technology the foundation of New York's carbon-free grid would ensure reliable, affordable, and sustainable energy. Nuclear power can provide both stable baseload generation and, with the potential adoption of advanced plants like Small Modular Reactor designs, can function as variable-load "peaker" plants. Extending the operating licenses of New York's currently operating nuclear plants from 60 years to 80 years would save \$9 billion in decarbonization costs according to NYSERDA. As you know, nuclear power accounted for 21% of New York's utility-scale net generation in 2022, down from 34% in 2019 because the Indian Point nuclear power plant, one of the state's four nuclear power plants, shut down.
- Nuclear power provides well-paying generational jobs for skilled tradespeople, supporting vibrant and resilient communities through steady tax revenues. A single nuclear plant can employ up to 1,000 individuals in full-time, well-compensated positions – far more than the handful of maintenance jobs associated with large solar panel installations that span thousands of acres. To put this in perspective, New York's three operating nuclear energy plants support 25,000 jobs, contribute over \$3 billion to New York's economy, and generate \$144 million in annual state and local taxes.
- According to the International Monetary Fund, nuclear energy has the largest economic multiplier effect of any clean energy technology with nearly all the money spent on nuclear energy stays in New York and the U.S.

- Nuclear has the lowest lifecycle greenhouse gas emissions and smallest overall land footprint of any electricity source. It also ranks among the least impactful on mining, materials, and toxicity when managed responsibly. Expanding nuclear energy will enable a more responsible build-out of solar and wind facilities, conserving nature and productive farmland from energy sprawl.
 - The amount of land a nuclear plant needs to power a city of 1 million can be as low as 1 square kilometer, that's equal to about 250 acres. In stark contrast, the same amount of energy generated by wind would need 183,000 acres and 46,000 acres are needed for equivalent solar generation. A small uranium pellet carries as much energy as 1 ton of coal.
 - Advanced Small Modular Reactors (SMRs), once operational, can be placed in existing nuclear and other fossil fuel based generating facilities or make use of brownfield sites without the use of more land acreage.
 - It is alarming that the Governor's push for CLCPA goals on our beautiful state will result in hundreds of thousands of acres of prime farmland being misused. Additionally, our forests and mountainous vistas, which attract millions of tourists every year, will be ruined with the site of wind turbines.

- According to the United Nations, per unit of energy generated, wind has 2 to 19 times the ecological impact of nuclear, even excluding climate change, which dominates the overall picture. The impact from solar is 17 to 29 times that of nuclear. The direct impact of mining, which is needed for large energy storage facilities and EVs, far outweighs any claimed CO2 emissions reduction by these technologies.
 - All methods of producing energy have risks. Nuclear is statistically the safest. Every year, millions of people die from coal pollution, and workplace deaths from other generation sources generate casualties at a higher rate than nuclear energy.
 - According to Earth.org, every ton of mined lithium equates to 15 tons of CO2 into the air.
 - The spent fuel from today's reactors (i.e., the "waste") can be recycled (as is currently done in France) to power the next generation of carbon-free nuclear plants. Nuclear power has proven itself, over the past six decades, to be as safe or safer than any other energy source.
 - In contrast the environmental impact of lithium mining is a well-documented disaster, while Cobalt mining has the horrific stain of years of child labor and human rights abuses.

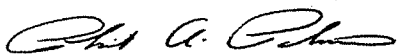
- According to the New York Independent System Operator (NYISO), roughly 92% of the energy produced in upstate NY in 2023 came from zero-emission sources, driven largely by access to

nuclear and hydroelectric power generation sources. This contrasts sharply with the downstate regions, which obtained at least 86% of their energy in 2023 from fossil-fuel fired power plants.

- NYISO has also indicated that the state will need 27-45 GW of dispatchable, emission-free generation by 2040. Currently, this level of technology is not yet available, nor is there certainty on what form it will take. Wind and solar, as intermittent sources, do NOT qualify as dispatchable or reliable generation. Therefore, it is critical that New York invest in research and support the development of advanced small modular nuclear reactors, as the federal government is doing to ensure its use in the future. It needs to be part of the solution.
- Reopening Indian Point should be considered as a viable option, as it previously supplied 25% of New York City's power. Since its closure, emissions have increased in NYC and downstate areas.

In sum, nuclear power offers stable, flexible, reliable and safe baseload energy. It can be produced cleanly, cheaply and accessibly. A Made-In-America nuclear program offers a strong solution to the energy security challenges facing New York and country, including our reliance on foreign supply chains and intermittent energy technologies. I heavily encourage the State to embrace a future powered by clean, advanced nuclear power technology. Thank you for taking the time to review my comments today.

Sincerely,



Philip A. Palmesano, Ranking Member

Assembly Energy Committee

132nd Assembly District