

State of New Jersey Board of Public Utilities
New Jersey Zero Emission Certificate Program for Eligible Nuclear Power Plants
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Testimony for the Record
Nuclear Energy Institute

John Kotek, Vice President, Policy Development and Public Affairs
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My name is John Kotek and I am the vice president of policy development and public affairs at the Nuclear Energy Institute. Prior to NEI, I served in the Obama Administration, where I led the Office of Nuclear Energy in the U.S. Department of Energy.

New Jersey is to be commended for displaying the leadership to preserve nuclear energy as part of the state's energy future. Nuclear provides more than 90 percent of the state's non-emitting electricity yet these plants are facing the prospect of early closure. By establishing zero-emission credits that value nuclear's non-emitting value, the state is creating a pathway for these plants to continue to serve as the foundation for a clean energy future in New Jersey. As a consequence of this policy, there is a future for over 1,600 workers in Southern New Jersey in providing carbon-free electricity for the entire state every hour, every day.

If we think of Salem and Hope Creek as a single site, it is the largest generator of carbon-free electricity east of the Rockies. But this remarkable fact has not been reflected in how the plants are valued. Without zero-emission credits to reflect the importance of carbon-free generation, these plants were facing an economic future shaped by a flood of natural gas unleashed by fracking in Pennsylvania and a market where more and more of demand is being pulled out solely to be served by renewables.

If we look back, wholesale power prices are about half of what they were when the recession hit. The industry has responded by improving its efficiency in operating these plants. Indeed, the cost of generating nuclear electricity has been driven down 25 percent since 2012, but that is not sufficient to keep these plants viable as we look into the future. Without some way to value what nuclear provides, there is no economic reason to keep these plants in operation. Zero emission credits (ZECs) are the solution to this problem.

For the ZEC to provide the desired signal they must be priced at a meaningful level that recognizes the value of carbon emissions avoided. New Jersey can look to the other states that have enacted zero-emission credit programs as references. The New York policy established a formula to determine the credit value. It was based upon the social cost of carbon estimated by the U.S. Government Interagency Working Group. Starting from this value of \$42 per ton, the Public Service Commission calculated the zero-emission credit value for New York based upon the carbon emission rate in the state. The initial value was set at \$17.48 per megawatt-hour and escalating through the life of the program. When the Illinois legislature established its zero-emission credit program the value was set in the statute at \$16.50 per megawatt-hour, increasing

over time. The legislation specified that this value was set to be consistent with the social cost of carbon. Each of the plants that have received ZECs have been able to reverse planned closures and remain in operation. New Jersey's program will operate in the constraints set in the law but the Board should ensure that the value of the ZECs should be set at a level that will accomplish the goals set forth by the legislature and approved by the governor. The current \$10/MWh ZEC value is notably lower than the NY and Illinois programs cited above, and far cheaper than other carbon-free generation energy in New Jersey.

It is incumbent upon New Jersey to address this challenge, as other organizations that might be able to do so have not stepped forward to act with the urgency needed to preserve nuclear's benefits as part of the state's energy future. Despite recent attention on climate issues there is not a consensus that would lead to a federal policy that would value nuclear's carbon-free attribute. The Executive Branch has discussed the need to preserve nuclear plants for security reasons but the policy proposal to do so has stalled out at the Federal Energy Regulatory Commission. PJM is assessing the need for fuel security but has not even put forward a proposal for consideration. As the BPU considers the path forward, it is clear that the risk of nobody acting is far greater than the risk of overlapping solutions. And there are provisions in the regulations providing customer protections against the possibility of double-counting of potential benefits.

This theme of federal inaction shows up in another area, as well. In my previous job I was responsible for the federal program to manage and dispose of spent nuclear fuel and other high-level radioactive wastes. As you may know, under a 1982 law, utilities were required to enter into a contract obligating the federal government to take the fuel for disposal starting in 1998, in return for a fee assessed on the generation of electricity from nuclear power. Of course, the promised disposal facility was never delivered, and the program has been at a virtual standstill since 2010, when the Administration proposed and Congress agreed to stop nearly all activity. Nearly a decade has passed, and the Administration and Congress still cannot come to an agreement on the direction of the program. Ultimately, a long-term solution needs to be implemented that will be funded by the Nuclear Waste Fund, which currently holds about \$40 billion, plus additional funding mechanisms. In the meantime, the companies that operate our nation's nuclear plants safely store spent fuel at the reactor sites in keeping with NRC safety regulations.

From a technical standpoint, this material is not difficult to store. I know this from personal experience, as I worked for several years within a few hundred yards of multiple fuel storage locations. The fuel is a hard ceramic inside of a metal tube that is stored inside a steel cask with a concrete liner sitting on a concrete pad. The storage facilities are monitored and guarded, and any issue with a storage cask could be readily addressed by moving the fuel to a new cask. The NRC has concluded that fuel can be safely stored at reactor sites in this manner for many decades. The existing storage technology has been optimized over the 33 years we have been using these casks. To date, over 3000 casks have been safely placed in service and are being expertly maintained for long-term storage. So my advice to you on this part of your charge is to rely on the federal regulatory framework for licensing and inspection of these facilities that assure they are safe, secure, and have no adverse impact on the environment. Second guessing

their design and construction would drive up the costs without meaningful safety benefits. Instead use this opportunity to call on the Congress to break the current stalemate and deliver the long-overdue used fuel management system.

Thank you for the opportunity to testify.