

Zero Emissions Nuclear Legislation – Senate Bill 128
Senate Public Utilities Committee
Testimony of Joseph Dominguez
June 1, 2017

Chairman Beagle, Members of the Committee: My name is Joseph Dominguez, and I am Executive Vice President for Governmental and Regulatory Affairs and Public Policy for Exelon. I am pleased to appear before the Committee today and offer our perspective on Senate Bill 128.

Let me start with some background and context.

- Exelon is one of the largest competitive power generators in the country, with over 32,000 megawatts (“MW”) of nuclear, natural gas, and renewable capacity. Exelon owns and operates 23 of the nation’s nearly 100 nuclear reactors, making us the Nation’s leader in nuclear generation. Exelon’s nuclear plants avoid approximately 150 million metric tons of carbon dioxide (CO₂) emissions annually.
- Our nuclear units are the best collection of power plants in the nation and in the world. We are most proud of the men and women who run these facilities and the work they do creating reliable, around-the-clock, zero-emission electricity.
- While fleet performance is better than ever, the nation’s nuclear fleet – particularly plants in competitive electricity markets – are facing unprecedented economic challenges.
- Despite broad recognition of problems, current market rules do not value fuel security, grid resiliency or reductions in emissions.
- Six nuclear units in five states have retired and another seven nuclear units in four additional states will retire by 2019.
- We can look at other states for examples of where plants were in jeopardy. In Wisconsin, policymakers were not given an opportunity to address unit challenges and Kewanee nuclear closed causing devastating effects. In Iowa, quick action by policymakers saved the Duane Arnold nuclear plant.

- When the Kewaunee nuclear plant in Wisconsin closed in 2013, it had a tremendous negative effect on the local economy. After its doors shut, the local county witnessed a loss of 15 percent of its jobs and 30 percent of its tax revenue.
- The Vermont Yankee plant that closed at the end of 2014 for largely economic reasons has triggered significant rate increases of 34% to 53% for customers in New England for 2015 and beyond. Further, the removal of Vermont Yankee's 604 megawatts of zero-emission capacity from New England's electricity grid has resulted in a 2.9 percent increase in the region's carbon emission rate according to ISO New England figures.
- In April testimony before the House Public Utilities Committee, Vermont Selectboard Chairman Josh Unruh described the devastating impact the loss of Vermont Yankee has had on the community, stating "...when Vermont Yankee closed, the cornerstone of our local community disappeared, causing families and friends to move away, and in turn, our businesses shuttered and many community members were left searching for jobs." Unruh further testified that, "About 300 million dollars a year no longer circulates in Vermont's economy due to the plant shutdown. Sadly, our small businesses are feeling that crunch the most, with reports as high as 20% in lost revenues. In addition, \$58 million in payroll per year is no longer paid to the over 500 people Vermont Yankee once employed."
- New York and Illinois have enacted programs similar to state renewable energy standards to level the playing field and ensure the continued operation of seven units representing 28,000 direct and indirect jobs, \$1 billion in local, state and federal taxes and over \$4 billion in state-level GDP. If repealed by the courts or mitigated by FERC, these units would immediately be in jeopardy.
- That is why I am here today. As a nation, we are at a crossroads. We are at risk of losing the very assets that most reliably produce electricity with zero carbon emissions, and help to ensure a stable and resilient electric grid. Witness the Polar Vortex of 2014 - grid operators at that time nearly had to resort to rolling blackouts, yet the system was supported by the superior reliability performance of its nuclear plants that have long-term fuel on site and can generate in all

weather conditions. On the other hand gas was constrained in the pipelines and coal froze on the conveyor belts.

- The North American Electric Reliability Corporation (NERC), which has the responsibility under federal law to conduct assessments of the reliability of the bulk power system (BPS) issued a report last month entitled a *Synopsis of NERC Reliability Assessments: The Changing Resource Mix and the Impacts of Conventional Generation Retirements* (NERC May 2017). Among the many assessments in the report, NERC found that, “Premature retirements of fuel secure baseload generating stations reduces resilience to fuel supply disruptions.” The report also states that “...nuclear generation has the added benefits of high availability rates, low forced outages, and secured on- site fuel. Many months of on-site fuel allow these units to operate in a manner independent of supply chain disruptions.”
- While the FERC-regulated markets have produced significant value for customers, it is generally understood that these markets do not address many environmental externalities, the need for fuel diversity, or concerns about grid resiliency arising from terrorism or operational catastrophes that threaten the natural gas infrastructure system that supplies gas-fired power plants. As a consequence, traditional baseload resources are not valued for their contribution to fuel-mix diversity or for the increased resiliency they provide by virtue of having a 30-day supply of fuel at the plant. In the case of nuclear energy, federal and state policies also, until recently, did not recognize the value of its emissions-free electricity, creating an un-level playing field.
- In view of the consequences of losing baseload zero carbon energy resources and the billions of dollars of value they add to the economy, we believe it is fair to revisit current energy policies.
- While there are currently discussions before FERC and the RTOs and at the DOE that may provide better recognition of the role that nuclear energy provides, the fact is that the energy markets do not currently reflect such values. Exelon supports the discussions taking place at FERC, DOE and among the RTOs and will continue to work collaboratively on long term regional wholesale market solutions to better recognize the value that nuclear energy provides.

- While some will point to those discussions to suggest that the Legislature need not act, that is a dangerous course of action with the potential for long-term negative impacts.
- To the contrary, in the absence of a regional solution there is an urgent need for states to act now to avoid further nuclear retirements. Illinois and New York recognized this urgent need to act, and in doing so more than 4,000MW of nuclear generation will continue to operate in these states, saving customers and the economy hundreds of millions of dollars compared to the cost of the respective ZEC programs.
- Absent a meaningful regional solution further nuclear retirements will occur unless states, like Ohio, take action. Just this week Exelon announced that it will move forward with the retirement of its Three Mile Island nuclear station in Pennsylvania in 2019. This was a difficult decision that did not come easily, but after taking extensive steps over the past five years to reduce costs at TMI, including decreasing capital and O&M spending by \$15 million annually, the efforts were simply not enough.
- Some believe that forces causing the premature retirement of nuclear plants do not apply to the Ohio nuclear plants, that the Ohio plants have value without a zero emissions program and can be sold to an interested buyer. As the only company that has purchased a nuclear plant in the past decade (notably a plant that is participating in a ZEC program), I see no chance of an interested purchaser for the Ohio plants.

Conclusion

- Some argue that these plants are yesterday's news and that we should plan for the future and ignore them. I agree that we should plan for the future, but planning for the future has to start with preserving what works today and what will also work tomorrow. It makes no sense to allow vital assets that have not even reached the midpoint of their design life to prematurely close.
- We believe that ZEC programs like the ones adopted in New York and Illinois could work well in Ohio.