

May 3, 2019

The Honorable Robert Tomlinson
Chair
Consumer Protection & Professional
Licensure Committee
Senate
Harrisburg, PA 17120

The Honorable Lisa Boscola
Minority Chair
Consumer Protection & Professional
Licensure Committee
Senate
Harrisburg, PA 17120

Chairmen:

The American Coalition for Clean Coal Electricity (ACCCE) submits comments to your Committee regarding Senate Bill 510 (S.B. 510), “The Keep Powering Pennsylvania Act,” that would provide a large subsidy to the commonwealth’s nuclear power plants. We respectfully urge you to reconsider S.B. 510 because it is unfair, will harm Pennsylvania’s coal fleet, and is at odds with market-based approaches that are intended to produce affordable and reliable electricity.

ACCCE is a non-profit organization that advocates at the federal and state levels on behalf of coal-fueled electricity and the coal fleet. Our members include electricity generators, coal producers, major railroads, barge operators, and equipment manufacturers. We believe the coal fleet is essential to maintaining fuel diversity, assuring a reliable and resilient electricity grid, and providing fuel security. Policies that harm the coal fleet and cause premature coal retirements undermine these objectives.

We are concerned that S.B. 510 is likely to cause more premature coal retirements. For example, PJM’s Independent Market Monitor estimates that up to 21,000 megawatts (MW) of coal-fired generating capacity within PJM are at risk of retiring because they are unable to recover sufficient costs to operate.¹ S.B. 510 is likely to exacerbate this situation for coal-fired generation in Pennsylvania and PJM.

There are five nuclear power plants in Pennsylvania, only one of which is at risk financially.² However, S.B. 510 would help all of these plants by creating a new group of Tier III resources principally focused on a nuclear energy credit program. Analysis by the Kleinman Center for Energy Policy at the University of Pennsylvania suggests that the cost of this new program to benefit the nuclear fleet could be within

¹ *PJM State of the Market Report 2017*, pg. 309. (“In 2017, most units did not achieve full recovery of avoidable costs through net revenue from energy markets alone ... There are between 38 and 46 coal units, with between 17,302 MW and 21,039 MW, at risk [of retirement].”)

² “Pennsylvania Nuclear Subsidy Proposal Erodes Choice,” Katie Tubb, The Heritage Foundation, March 28, 2019. See Table 1, “Three Mile Island an Outlier in Pennsylvania Nuclear Power,” based on data from Monitoring Analytics, “PJM State of the Market-2017,” November 8, 2018.

the range of \$500 million in its first year. States within the PJM market already subsidize, or are expected to subsidize, as much as 14,000 MW of nuclear generation, offshore wind, and other renewables.³ These subsidies have forced PJM to consider ways to prevent further harm caused by out-of-market subsidies, such as the subsidy that would be established by S.B. 510.⁴ Because of its concern, the Federal Energy Regulatory Commission (FERC) has initiated a proceeding to address out-of-market subsidies.

The coal fleet is necessary for grid reliability, resilience and fuel security. The coal fleet possesses attributes that are essential to maintaining a reliable and resilient electricity grid. One of these attributes, fuel security, is essential for grid resilience. The coal fleet provides fuel security because the average coal-fueled power plant has a 70-to-80-day supply of coal stockpiled on site.⁵ A reliable grid means having an adequate supply of electricity 24/7 under relatively normal circumstances. A resilient grid means that the grid can withstand and recover quickly from unusual disturbances—such as extreme weather, cyber threats or physical threats—that can have severe consequences.

Pennsylvania has the nation’s eighth largest coal fleet but ranks second as having the most coal retirements with 42 coal-fired electric generating units that have retired or announced retirement. PJM has the largest amount (32,400 MW) of retiring coal-fired capacity of all the RTO/ISO regions.⁶ In fact, PJM has as much retiring coal capacity as all the other RTO/ISO regions combined. Nationwide, 40 percent of the coal fleet has retired or announced plans to retire.⁷

As these coal-fired generating units retire, they are most often replaced by less resilient generation, leaving the electricity grid vulnerable to disruption. The grid’s increasing dependence on natural gas and the retirement of traditional baseload power plants have raised concerns that these trends may be jeopardizing the reliability and resilience of the grid. Concerns have been raised by the Department of Energy, FERC, NERC, ISO/RTOs, the National Academy of Sciences, and the National Energy Technology Laboratory, among others.⁸

³ FERC, Order Rejecting Tariff Revisions, Granting in Part and Denying in Part Complaint, and Instituting Proceeding Under Section 206 of the Federal Power Act, June 29, 2018.

⁴ According to PJM testimony, the nuclear credit for Illinois is \$96,797/MW-yr, or \$135,515,800 for 1,400 MW of nuclear generating capacity. PJM Filing, *Capacity Repricing or in the Alternative MOPR-Ex Proposal: Tariff Revisions to Address Impacts of State Public Policies on the PJM Capacity Market*, April 9, 2018, Attachment 2 to Affidavit of Dr. Anthony Giacomoni.

⁵ EIA, *Electricity Monthly Update with data for May 2018, July 24, 2018*.

⁶ *Id.*

⁷ American Coalition for Clean Coal Electricity, *Retirement of Coal-Fired Electric Generating Units as of Feb. 7, 2019*, www.americaspower.org

⁸ These include DOE’s “Notice of Proposed Rulemaking, Grid Resiliency Pricing Rule,” Docket RM17-3-000, Sept. 28, 2017; NERC’s “Generation Retirement Scenario Special Reliability Assessment,” Dec. 18, 2018; NETL’s “Reliability, Resilience and the Oncoming Wave of Retiring Baseload Units, Volume I: The Critical Role of Thermal Units During Extreme Weather Events,” DOE/NETL-2018/1883, Mar. 13, 2018; FERC “Grid Resilience in Regional Transmission Organizations and Independent System Operators,” Docket AD18-7-

Out-of-market subsidies harm coal. There are two ways in which out-of-market subsidies for nuclear power plants hurt coal-fired generation. One is capacity markets and the other is energy markets.

With regard to capacity markets, subsidies to nuclear units allow them to bid lower prices into PJM's capacity market auctions because the revenue needed by those units is reduced by the amount of the subsidy. As a result, more nuclear units will clear the auction at the expense of coal units that would otherwise have received capacity payments.

With regard to energy markets, nuclear units have high fixed costs but very low operating costs. Therefore, nuclear units typically run whenever they are available. If a nuclear unit does not make enough revenue in the capacity and energy markets combined, it will retire eventually. Out-of-market subsidies keep uneconomic units in the market and result in artificially lower prices for other electricity sources. All remaining generators receive a lower market price and less revenues, which can lead to premature coal retirements.

Coal already faces challenges in ISO/RTO markets caused by price suppression by resources that receive out-of-market payments. S.B. 510 is typical of these out-of-market payments. PJM has warned that these subsidy-enabled offers "negatively impact all resources by distorting price signals and eroding revenue streams."⁹ These distortions have had a direct impact on traditional baseload generation.

There are better ways to sustain fuel-secure resources. S.B. 510 helps nuclear generation, but coal generation would be worse off. Therefore, we urge the Committee to consider better ways to help *both* nuclear and coal. In particular, a better approach is to remedy obvious market flaws by valuing resilience attributes—especially fuel security provided by nuclear and coal—the same way markets currently value other attributes, such as essential reliability services. Correcting PJM's market flaws in order to value resilience attributes will help both nuclear and coal. For that reason, we have proposed two approaches that would establish a market-based mechanism to value fuel security.

Under one approach, resources could qualify to participate in a newly created auction by guaranteeing that fuel is available for a specified number of days. On-site fuel supplies that can last for the specified number of days without resupply

000, announced January 8, 2018; National Academy of Sciences' "Enhancing the Resilience of the Nation's Electricity System," 2017; Western Electricity Coordinating Council's "Western Interconnection Gas – Electric Interface Study," prepared by Wood Mackenzie, June 2018; and PJM's "Fuel Security: Analyzing Fuel Supply Resilience in the PJM Region, Summary of Results, Conclusions and Next Steps," Nov. 1, 2018.

⁹ PJM, *Energy Price Formation and Valuing Flexibility*, pg. 93, June 15, 2017, <https://www.pjm.com/~media/library/reports-notice/special-reports/20170615-energy-market-price-formation.ashx>.

would qualify as a guarantee of fuel availability.¹⁰ These resources would offer their fuel-secure capacity into the new auction.

Under the other approach, any resource could offer capacity as it does now and clear through the existing capacity auction. However, fuel-secure resources would participate in a second, new auction which would be conducted after the existing auction. A fuel-secure resource would make an offer into this new auction that reflects any revenue shortfall left after the fuel-secure resource participates in the existing capacity market auction.¹¹

We recognize the federal government has jurisdiction over the wholesale market operated by PJM. However, in light of the impact these market structures have on Pennsylvania's electricity rates and electricity choices, we urge your Committee to work with PJM to value fuel security.

Conclusion. To maintain the reliability and resilience of the grid, we have urged federal agencies and states to take reasonable steps to prevent the premature retirement of even more coal-fired electric generating capacity. S.B. 510 would have the opposite effect by distorting the electricity market in PJM and putting further financial strain on the state's coal fleet, most likely leading to more premature coal retirements. Therefore, we respectfully urge you to reconsider S.B. 510.

Sincerely,



Michelle Bloodworth
President and Chief Executive Officer
America's Power (ACCCE)

¹⁰ Resources that have the required amount of fuel on site would offer capacity and clear first through an auction conducted exclusively for fuel-secure resources. Next, the fuel-secure resource would participate in the existing RPM auction. A resource that cleared both markets would be paid the higher of the two clearing prices.

¹¹ If gas prices rise, fuel-secure resources would earn more revenue in PJM's existing capacity and energy markets, and the additional revenue needed through the fuel-secure auction would diminish.