September 7, 2018

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Department of Natural Resources

Re: Renewable Industry Response to PPRP Nuclear SWOT Analysis For RPS Study Group

The enclosed comments and analysis represent the views of a coalition of industry representatives and participants in the RPS Study Group process including AWEA, MDV-SEIA, MAREC & USSEC (the "Coalition"). We thank PPRP for the opportunity to provide comments on the nuclear SWOT analyses provided to the RPS Study Group on August 27th, 2018. The Coalition has significant concerns on incorporating ZECs in the RPS, let alone subsidizing nuclear power in Maryland. We believe PPRP should consider the following points:

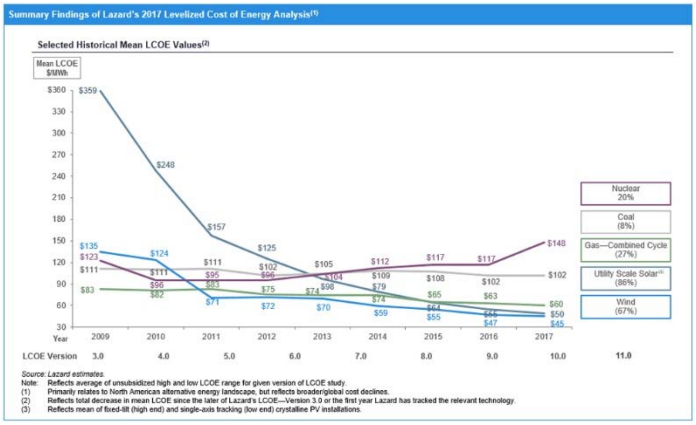
- **Calvert Cliffs is the second-most profitable nuclear facility in the country.** According to PJM's *Quarterly State of the Market Report*, Calvert Cliffs will realize over $194 million in surplus revenue in 2018, and will continue to generate an annual surplus through 2021. Providing additional revenue to a financially-healthy generator is an irresponsible use for ratepayer dollars.

- **The RPS is not an appropriate program for nuclear subsidies.** As noted in the analysis, few states have directly incorporated nuclear power as an eligible technology for the RPS. Unit-based bailouts -rather than market-based subsidies- are more appropriate mechanism to ensure fledgling nuclear plants do not close.

- **Adding nuclear power as an eligible Tier 1 resource in any PJM state would crash the regional REC market.** If nuclear power were eligible to sell RECs into the Tier 1 market, there would instantly be an oversupply of Tier 1 RECs across all PJM states. The resulting REC price crash would throw the markets for wind and solar into turmoil and frustrate the primary intent of state RPS programs, which is to incent new additions of clean energy generators

- **Unlike renewable power, subsidies for nuclear have not resulted in cost declines.** A key purpose of an RPS is to bring emerging, renewable technologies to market, with an expectation price-support mechanism decrease over time. RPS policies in 29 states in the District of Columbia have driven dramatic reductions in levelized cost of energy (LCOE) of renewables nationwide. Meanwhile, the cost of nuclear power has increased over the same period.

- **Nuclear power subsidies do not spur local innovation and new industry growth in Maryland.** There is no evidence that subsidizing nuclear power in Maryland will result in significant investment in research and development of new nuclear technology or market entrants. On the other hand, Maryland's investment in renewables has attracted 120 wind and solar companies across the supply chain to support the growth of the clean power industry, resulting in 5,500 in-state jobs.



- **The SWOT analysis should weigh costs against ratepayer savings.** PPRP's draft SWOT analysis notes that nuclear power subsidies resulted in avoided costs of $1.7 billion in New York's ZEC program. However, the ratepayer impact in that example results in a nets cost of $7.6 billion over 12 years to New York ratepayers, a fact that reverses the conclusion the SWOT (and Maryland) should draw from the New York example

- **Economic benefits should be analyzed at the state level.** PPRP's SWOT analysis noted nuclear power plants employ 475,000 full-time workers. However, Calvert Cliffs reports approximately 900 full-time employees. Citing national statistics distorts the economic impact of nuclear power for the state of Maryland.

- **Nuclear waste and non-carbon emissions.** While nuclear electricity generation involves very little carbon dioxide (primarily associated with significant emissions associated with plant construction), there are a number of non-carbon pollutants that make nuclear energy a dirty energy source. The radioactive waste generated by nuclear plants is one of the most potent and problematic forms of pollution on earth and long outlives any financial accounting for the cost of its safe storage. Additionally, according to the U.S. Nuclear Regulatory Commission, more than half of the nation's nuclear facilities have released radioactive tritium in excess of safe drinking water standards (https://www.nrc.gov/reactors/operating/ops-experience/tritium/sites-grndwtr-contam.html). Nuclear power also has other negative environmental impacts associated with cooling towers, the nuclear fuel supply chain, the transporation of nuclear waste, and the risk of nuclear accidents. In short, nuclear power is far from clean and should not be viewed as a source of clean energy.