

Dear Mr. Chair and Committee Members:

Thank you for reading my testimony today in strong opposition to [HB0505/SB434](#)

My name is Dave Arndt, a Baltimore resident, a chemical engineer and a retiree of NIH.

Maryland's clean energy ambitions are crumbling under the weight of policy missteps. These missteps are having a dramatic negative effect on ratepayers and achieving our RPS and Climate Solutions Now goals. While the ENERGIZE Act recognizes these issues, it does not implement any changes that will positively negate our policy missteps.

Nuclear power will not address the immediate need to reduce energy bills and address resource adequacy. In December 2024, the [MEA Energy Report](#) indicates that MEA does not think it is feasible to build any new reactors by 2035, furthermore they do not say when they believe it would be feasible to build the modeled number of gigawatts needed to support this bill's new energy requirements.

- The last nuclear power plants completed in the US were the [Vogtle Units 3 & 4](#) in Georgia. They took 15 years to build and cost \$36.8 billion, more than twice the projected timeline and cost. They provide ratepayers the most expensive electricity in the world at \$10,784/KW. Normal (wind and solar) generation prices range from \$1,000 to \$1500/KW.
- In [South Carolina](#), their nuclear project was halted in 2017 "following years of extensive and costly delays and then bankruptcy by its contractor," Santee Cooper said. At that point, Santee Cooper and South Carolina Gas and Electric (now a part of Dominion Energy) had already poured \$9 billion into the project. Santee Cooper and Dominion customers have been paying for those costs, even though the units haven't been in operation.
- SMRs are getting all press and attention however, [they are too expensive, too slow and too risky](#).
  - The [TerraPower project](#) likes to claim; "They've recently broken ground on the only new nuclear reactor that's currently under construction in the United States." That is just completely false. TerraPower has NOT begun construction on its Sodium reactor. It doesn't even have a construction permit from the Nuclear Regulatory Commission, and it won't until 2026, at the earliest. The company broke ground on a test facility for developing the liquid sodium coolant that the reactor will use.
  - The [NuScale project](#) in Idaho was canceled BEFORE construction began. Initially cost estimates were \$3B, however they rose to \$9.6B and the project has been shelved.
  - Even if the unlikely rollout of [SMRs eventually happens](#), it will unfold too late to curb the climate crisis.
  - [Three Arizona's three largest utilities](#) are collaborating to build an SMR, they say SMRs could be operating by the early 2040s if permits and financing fall into place. How will this solve our energy issues today or even the next two decades?

- [SMRs cannot be counted on to provide reliable](#) and resilient off-the-grid power for facilities such as data centers. It very likely will take decades of operating experience for any new reactor design to achieve the level of reliability characteristic of the operating light-water reactor fleet. Premature deployment based on unrealistic performance expectations could prove extremely costly for any company that wants to experiment with SMRs.
- And finally, we hear the ideal place to locate SMRs is close to the energy user, therefore saving costs on installing transmission and distribution lines. The ideal client is a data centers. Where are the proposed new data centers in Maryland? Frederick County, Montgomery County and Prince Georges County, are they ok with have SMRs close to residents? Also, the generally planned size for such SMRs is between 50 and 80 MW. That means, assuming 80 MW size, the Landover data center site with a projected power need of 820 MW would require at least 10 SMRs, and the Frederick data center site would require 17 SMRs. Remember that all nuclear spent materials would also have to be stored on site.
- Overall, we have to look the opportunity cost of relying on nuclear power.
  - Solar is far cheaper and safer. [Lazard](#), a financial firm, estimated that the unsubsidized levelized cost of electricity from new nuclear plants in the U.S. will be between \$141 and \$221 per megawatt hour. By comparison, a newly constructed utility-scale solar facility with some storage to provide power after the sun sets will produce power at an unsubsidized levelized cost of between \$46 and \$102 per megawatt hour. Costs for these technologies have been trending in opposite directions: nuclear is going up whereas [solar and batteries have become cheaper](#) and are expected to decline further.
  - Batteries technology is changing dramatically, [Texas](#), [California](#) and [Europe](#) are implementing solutions today.

It is premature to offer long-term and extremely expensive nuclear energy solutions without conducting the integrated energy resource planning envisioned in SB909 Energy Resource Adequacy and Planning Act. There are also more expeditious and lower cost solutions, such as those proposed in SB316 the Abundant Affordable Clean Energy Act.

This bill is a step backwards in meeting our goals.

For all of these reasons, I strongly oppose HB0505/SB434 and urge a **UNFAVORABLE** report.

Thank you,

Dave Arndt