

At What Cost: Why Maryland Can't Afford More Subsidies for Nuclear Power

When we subsidize the nuclear industry, we are left with aging facilities and nuclear waste we have no way to dispose of. When we invest in new renewable energy, we are building the energy of our future.

Nuclear power has relied on government subsidies for 60 years. Without billions of dollars in direct and indirect subsidies, and taxpayers on the hook to cover liability in case of an accident, the nuclear industry would not exist.

When we restructured Maryland's electricity markets twenty years ago, energy generators accepted the risks of competition and have earned substantial profits. As the Calvert Cliffs reactors near retirement, we must responsibly prepare for the inevitable shut down of our existing plants.

Nuclear Power: Costly & Wasteful

Subsidizing nuclear power is counterproductive to our energy goals.

Nuclear power already benefits from a large number of government subsidies. A 2011 report showed that subsidies for nuclear power have often cost taxpayers and consumers more than the value of the electricity that reactors generate. [1]

Every dollar we spend propping up aging reactors is a dollar we can't spend on the inevitable transition away from nuclear power to a clean, safe, and affordable energy economy. Energy efficiency, wind, and solar are all cheaper than continuing to invest in nuclear, and much faster to get online.

A National Trend of New Subsidies

Recently, Exelon has begun collecting new subsidies in several states:

In New York, Exelon is receiving over \$540 million per year in subsidies that could cost ratepayers \$7.6 billion by 2029--making nuclear power far more expensive than acquiring electricity from wind and solar.

In Illinois, Exelon blocked renewable energy programs until it got \$2.5 billion for three reactors in 2016. Now, Exelon is demanding subsidies for eight more reactors.

In New Jersey, Exelon and PSEG are now receiving \$300 million per year in subsidies for three already-profitable reactors.



[1] Koplou, Doug. "Nuclear Power: Still Not Viable Without Subsidies. Union of Concerned Scientists." February 2011. <https://www.ucsusa.org/nuclear-power/cost-nuclear-power/nuclear-power-subsidies-report>

New Reactors: Bad Bets & False Promises

Building nuclear reactors is too expensive, too slow, and too risky to be a viable climate solution.

Too Expensive: New reactors now cost 3-4 times more than onshore wind and utility-scale solar. Over the last ten years, the cost of nuclear has increased by 25%. The costs of wind and solar have decreased by 70% and 89%, respectively.

Too Slow: Planning and building a new nuclear power plant takes at least 10 years. And multi-year delays are common. In the US, completion of Vogtle 3&4 is now slated to take at least 15 years. Completion of the Flamanville and Olkiluoto reactors in Europe is also delayed to 15 years or more.

Too Risky: Building reactors has a high risk of failure. Over the last fifty years, more than half of all reactors planned in the US were cancelled. That failure rate has worsened. Since 2007, plans to build 30 new reactors were announced. All but two have been suspended, cancelled, or abandoned construction.

New Designs, Same Problems: New reactor designs are unlikely to reverse these trends. Small Modular Reactors (SMRs) would require mass-scale, factory production to achieve lower costs. No private parties have lined up to order large numbers. That means that high costs and reliance on government are likely to continue with SMRs, and may get even worse

Other proposed designs (“advanced” reactors) are considered even more speculative, based on decades-old concepts that have not proved to be commercially feasible.



New Subsidies for Old Reactors: Maryland Deserves a Better Plan

Calvert Cliffs is an aging nuclear power plant, which will eventually need to be shut down. Subsidies would only delay closure--investing in wind, solar, and efficiency, instead, is far more cost-effective.

Old Technology: Currently operating reactors in the US are among the oldest in the world. The average age is 39 years old—and half of reactors are over 40. The reactors at Calvert Cliffs are among the oldest: 44 and 42 years, respectively.

Subsidies Unjustifiable: Subsidizing old reactors has proven expensive. Based on the record in other states, Maryland can expect nuclear subsidies to cost about \$1.5 billion by 2030, in addition to the cost of electricity from Calvert Cliffs. Acquiring wind and utility-scale solar would be a surer, economical way to reduce emissions and protect Marylanders' pocketbooks.

Lax Regulation: “Relicensing” of aging reactors is lightly regulated in the US. Reactors receive 20-year license extensions, with no physical inspections or safety tests. By comparison, every ten years, France requires months of physical inspections and safety tests. Under pressure from the industry, the Nuclear Regulatory Commission is proposing to weaken safety inspections and enforcement.

Climate Risks: Reactors were not sited with climate disruption in mind. Yet, relicensing does not require addressing the dire conditions that are emerging, even for coastal sites like Calvert Cliffs.

Water Impacts: Calvert Cliffs withdraws 3 billion gallons from the Chesapeake Bay every day to cool the reactors, heating the water and disrupting the ecology of the Bay.

Nuclear Waste: Calvert Cliffs stores over 1,500 metric tons of high-level radioactive waste. Continued operation adds 30 more tons every year, containing enough plutonium for 50 nuclear warheads, if extracted from the spent fuel. The waste is essentially hazardous forever, posing a variety of safety and ecological risks.