

From: Steven Curtis

Sent: Friday, July 21, 2023 10:39 PM

To: SEAB

Subject: Comment to the Secretary of Energy's Advisory Board on Nuclear Energy,
July 26, 2023

Dear Madam Secretary

I am a former DOE employee in the Nuclear Emergency response teams. I am also a veteran of the Yucca Mountain wars of the 80s, 90s, and 00s in Nevada, as a concerned citizen, not an employee. My current avocation is to educate state Governors on the value of Small Modular Reactor (SMR) microgrids to the resiliency of the national delivery of electricity and the value of Used Nuclear Fuel (UNF) as an energy source.

SMRs are very simply the cheapest (when in mass production), most energy dense, and safest method to deliver electricity to the public. As an added bonus, they are the cleanest source of energy, especially if you recycle existing commercial UNF in fast reactors. The combination could be the most powerful manifestation of competition to benefit the consumers of electricity, and the releasing of massive amounts (up to 250 years of all US electricity production) of power at almost an order of magnitude lower than exist today.

As you know, the current grid suffers from threats to its ability to deliver electricity to customers. The current business case for electric utilities centers on the creation and use of a monopoly. Such a combination threatens to deny our US citizens of their most important commodity: affordable, available, and robust electricity.

The technology exists today to transform the electricity production business to one of 100% clean, 100% domestic, and high profits while producing energy far cheaper than the consumer pays today. The microgrid format decreases the threat from EMP, cybersecurity, and terrorist attacks by isolating many consumer communities from the failure of any single part of the

grid. As you know, several well-placed disruptions can take out most of the electricity delivery in the US and one EMP burst above the US can relegate the entire country to a situation of no electricity for over 90% of its citizens, perhaps for decades. There are many foreign US enemies working to do just that. No commodity loss would inflict more detriment on quality of life for US citizens than loss of their electricity.

These solutions are available simply by returning to common-sense regulation for new reactors. By allowing the existing technology to compete, including wind and solar energy, you could guarantee that innovation will proliferate and robustness of the delivery system could be significantly improved. By burying UNF, the US will incur a cost of between \$400-\$800 billion, far more than exists in the current Congressional Nuclear Waste Fund. Further, you will sequester the (at one cent per kWh) \$10 trillion value of UNF to a "forever" grave. By recycling UNF in fast reactors, this value could be realized, and the technology exists today to do so.

Please consider the future well-being of our posterity in your decisions and focus on unleashing the tremendous power of nuclear energy to truly help our US citizens and significantly reduce pollution of the air, while lowering the cost to "almost free" levels for everyone (worldwide) while significantly hardening our US grid to potential disaster.