

**Southern Alliance for Clean Energy (SACE) Public Comments at the
NRC Environmental Scoping Meeting Regarding TVA's Early Site Permit (ESP) for Small
Modular Reactors (SMRs) at the Clinch River Site in Tennessee
May 15, 2017**

Good afternoon. My name is Michelle Powell and I am a long-time resident of Oak Ridge, Tennessee. I also work with the Southern Alliance for Clean Energy or SACE, which has staff in Knoxville and Memphis along with Board members in Nashville and Chattanooga. The Southern Alliance for Clean Energy is a nonprofit organization that promotes responsible energy choices that work to address the impacts of global climate change and ensure clean, safe, and healthy communities throughout the Southeast. We have had a long history both watchdogging TVA and working with TVA to transform the region's electricity production to be cleaner, safer and more affordable for Valley residents and businesses.

Unfortunately, we are here today to voice our serious concerns about the highly speculative and risky proposal to pursue expensive, untested small modular reactor technology at the Clinch River Site. We have several requests for what the NRC must include in the draft Environmental Impact Statement (EIS) and will submit additional written comments.

Clinch River Site & History Repeats Itself

For those unaware, the Clinch River Site being discussed today has a very long, troubled and expensive history. Some experts in the nuclear power field have said that it's possibly only behind the Shoreham nuclear power reactor for the most expensive electricity *never generated* record. In a May 1979 U.S. Government Accountability Office (GAO) report on the Clinch River Breeder Reactor program, it said that the project was proposed back in 1970 with an original cost of \$700 million. But serious problems ensued and its operational date was pushed back to 1987 with a revised total project cost of \$2.6 billion. When that 1979 GAO report was released, already \$674 million had been spent. Spending continued and eventually, the project was scrapped.

We are very concerned that history is once again repeating itself and a more recent July 2015 GAO report on SMRs confirms this – billions of dollars could be spent on a nuclear reactor technology that is unproven, untested and significantly more expensive than other types of energy technologies that are actually available today, including renewables such as solar and wind and energy efficiency and demand side management measures.

High Costs

As reported in American Public Power Weekly's December 13, 2010 newsletter, TVA's former VP for nuclear generation, Jack Bailey, stated that in dollars per kilowatt, the small modular reactors are expected to be more expensive to build than a single large nuclear plant. Mr. Bailey left TVA several years ago and in 2014 became VP of Business Development with NuScale Power, one of the SMR vendors under consideration for the Clinch River Site. That in itself is concerning, given how closely connected Mr. Bailey was to TVA. But even more troubling is that the economics of new nuclear *have only worsened since 2010*, while the economics for renewables and energy efficiency have improved.

The NRC must include updated economic cost analysis of the actual costs of new nuclear reactors. This can be done by looking to nearby Georgia and South Carolina where the under construction

Toshiba-Westinghouse AP1000 reactors are many years delayed and billions of dollars over budget. In fact, Westinghouse has filed for bankruptcy and is out of the construction business and parent company Toshiba, may be next in line. These projects may never be finished. The reality is that new nuclear power is a losing bet and the draft Environmental Impact Statement (EIS) must consider accurate cost estimates as compared to other energy technologies that have only seen costs drop as new nuclear power costs soar.

Need For Power

TVA's 2015 Integrated Resource Plan, or IRP, a 20-year long-term energy plan that the Southern Alliance for Clean Energy closely worked on, showed that the utility did not need any new baseload generation beyond Watts Bar 2 and the possible extended power uprate at the three Browns Ferry reactors. In part because of the outcome of the 2015 IRP, the TVA Board made an extremely wise decision to stop pursuing any of the possible four reactors at their Bellefonte site in Alabama – because they were not needed within the next 20 years and would also be too expensive. In fact, that site has now been sold. Unlike many other generating technologies, SMRs were not really evaluated in the 2015 IRP and were instead categorized as a special project.

TVA did not include a “Need for Power” analysis that is typically part of the Environmental Report in the ESP application. We are concerned that was not included because if it had been, based on the outcome of the 2015 IRP, TVA would not be able to demonstrate to the NRC a need for SMRs, even 20 years from now. Why spend tens of millions of dollars on a licensing process for something that is not even needed? The NRC needs to conduct a full “Need for Power” analysis for this draft EIS – not punt this essential review to the combined operating license stage. The NRC must not hide behind the purported “need” as stated in TVA's ESP application to provide secure power to DOE facilities such as Oak Ridge National Lab. TVA ratepayer money is being wasted on something that is not needed. In fact, SMRs don't even exist yet – there isn't even a certified reactor design – therefore it is impossible to state now that “SMRs can provide reliable energy for extended operation” as TVA misleadingly stated in their ESP application.

Water-Intensive Technology

In terms of our water resource, SMRs are even more water intensive than traditional nuclear reactors, which are already a water-hogging technology that strains water resources. The NRC needs to analyze the fact that SMRs use more water per unit of electricity produced than a plethora of actual clean, safe energy options. As climate change impacts, such as prolonged droughts, potentially become more frequent, we must pursue water-saving not water-squandering energy choices.

In conclusion, after all the money and all the years wasted during the first round of evaluating Clinch River for a breeder reactor, it is time to stop throwing good money after bad and repeating the mistakes of past history. TVA leadership has to extricate itself from the clutches of the nuclear industry, including its proponents within the Department of Energy. SMRs do not make any sense, not today and not tomorrow.

Thank you.

[For any questions, please contact Sara Barczak, 912-201-0354 or sara@cleanenergy.org.]