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SMALL MODULAR REACTORS

Clinch River Nuclear Site is located in Roane County, Tennessee, about 25 miles from Knoxville. In 2016 Tennessee Valley Authority submitted an application asking for approval of its Clinch River site near Oak Ridge National Laboratory. They want early permission in order to place so-called small modular reactors (SMRs) on the site whenever and if ever there were to be a design for them and the licensing could be obtained, years down the road. On April 13, 2017, the U.S. Nuclear Regulatory Commission published in the Federal Register (82 FR 17885) its intent to prepare an EIS for the Tennessee Valley Authority's (TVA) early site permit for the Clinch River Nuclear Site. TVA's request identified the Clinch River site as suitable for two or more so-called small modular reactors, experimental nuclear power plants which range from 50 megawatts to 300 megawatts, about one-third the power of conventional nuclear power plants.

TVA's idea with small modular reactors is that if they can't find a customer for a 1000 Megawatt (MW) reactor, they can build a small one, about 300 MW in size, that will appeal to municipalities so they can afford to supply their electrical needs. They promise cheap, safe, green energy, none of which is true. At the Clinch River site, the perceived plan is not just to have one 300 MW reactor buried, but twelve attached to each other.

On June 12, 2017, the Blue Ridge Environmental Defense League submitted a legal Petition to the US Nuclear Regulatory Commission to Intervene in Tennessee Valley Authority's plans for so-called small modular nuclear reactors (SMRs) at the Clinch River Nuclear Site. Their principal argument was: TVA's Environmental Report fails to provide complete and accurate information on alternatives, including the no-build option. In its Environmental Report for this project, TVA attempts to justify its site permit on the basis of global warming and energy security. However, neither of these goals is advanced by the siting of two or more modular reactors at the Clinch River Nuclear Site.

So, are Small Modular Reactors safer?

- Underground siting increases risk during flooding, evacuation.
- Less robust containment of SMRs have greater chance of damage in hydrogen explosions.
- SMR passive cooling systems do not have active backup systems.
- Multiple SMRs present higher risk if operators reduce support staff or safety equipment.

“There is therefore no basis at the present time for the NRC to grant SMRs any special exemptions to its regulatory requirements, and the Department of Energy should take steps to insure that its Technical Licensing Support program does not use taxpayer funds to endanger public health by undermining nuclear safety and security standards.” Dr. Edwin Lyman