

## ClinchRiverESPEISCEm Resource

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**From:** Walter Wunderlich <waltwunder@gmail.com>  
**Sent:** Tuesday, May 16, 2017 11:05 AM  
**To:** ClinchRiverESPEIS; Walter Wunderlich; Andrew Wunderlich  
**Subject:** [External\_Sender] Modular Reactor or Renewables?

The News Sentinel of May 16 reported divided opinions on the planned Small Nuclear Reactor (SMR). The nuclear interests are for and the environmental interests against it. What's new? Evidently there are pros and cons of which I want to comment on.

1. I find the site very precarious. It should never have been chosen for any nuclear experiments. It is surrounded on three sides by the Clinch River, a major waterway that feeds into the Tennessee river which feeds into the Mississippi River, the short stretch of Ohio River discounted. The recent experience with the Japanese Daiichi plant makes one to think about it. What if this thing explodes, what if its containment cracks? What is the geology around the site? Is it rocky, is it shaly, is it loamy? seismicity? One would assume that these elementary questions have been asked and answered satisfactorily by now.
2. The exposure of freshwater resources to nuclear contamination is more or less critical depending on what this SMR really is. Sometimes it is presented as if it were just the size of a Truck trailer, sometimes one has the impression it is a huge structure. How much output does it provide? Is it relevant to the TVA system? Probably not, but as a small self-contained power source it could well be of national importance. Still the question remains: Do these experiments have to be conducted in a river bend of the Clinch River, in a relatively densely populated area of a very scenic part of the country, that has many other potentials. Putting nuclear weapons facilities there is bad enough, but this was a war time decision and was made at a time when the ramification of nuclear contamination were either not recognized or belittled.
3. If it is an experimental design of national importance the TVA rate payers should not be used as test rabbits for footing the bill if they already shoulder the risks of possible failure. Given the unreliability of renewable energy at least as long as we don't have the necessary bridging capabilities, SMRs could fill a very necessary role in stabilizing electricity supply, especially near locations where electrical supply reliability is paramount. Hopefully these reactors can be made safe enough that they can be also located near these locations, i.e., by self-contained cooling as well as by self-contained emergency systems. Until this happens TVA should direct its attention to the urgently needed revamping of the legal environment that prevents it from continuing its role as a valley-wide resource development agency, as addressed in 4.
4. The TVA would do better addressing its responsibility of making the region a solar powered residential region of world class status. I recently became aware that the TVA is a hindrance, or more specifically, some obsolete law is a hindrance in completely solar powering residential needs just because it makes TVA the the sole legal supplier of energy to local distributors, who are thus not allowed to buy solar power produced by residents. I think this is outrageous obsolescence in this age of distributed solar power production capability (see Knoxville Mercury, March 2017: *Tale of the Two Meters*). TVA was not a power company to start with. Now it is time to remember its roots and promote residential solar power instead of being a hindrance to solar energizing the Tennessee Valley Region. Many individuals in this region have installed solar and it would turn into a tsunami if the thumb screws would not be kept on people's initiative to produce their own power, but by far not enough. In countries which are much less endowed with solar energy many more people have gone solar than here, where a so-called regional development agency denies solar power to its residents just due to some obsolete law. Actually, TVA and the region should be a world leader in residential solar energy supply. How long have we still to wait for this to happen?

5. Thinking about TVA's wind power import project and also about the solar energizing of the Tennessee Valley Region, the East Tennessee area that could be spoiled by a nuclear mishap lends itself much more for cooperating in the renewable energy system by pumped storage energy than for nuclear power experiments. We have the Cumberland rim with hundreds of meters of head for any number of such plants that have relatively high efficiency, are of proven technology and can be run totally automatic and totally pollution free.

Walter Wunderlich  
3221 Essary Dr.  
Knoxville, TN 37918  
[waltwunder@gmail.com](mailto:waltwunder@gmail.com)

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