

ROB received

3/9/05

**From:** <DBakerPE@aol.com>  
**To:** <NorthAnna\_ESP@nrc.gov>  
**Date:** Mon, Feb 28, 2005 4:59 PM  
**Subject:** NUREG 1811 comments

(645)

The following comments are submitted regarding Draft NUREG 1811 (EIS for North Anna ESP):

1. Numerous comments have been made advocating that solar and wind power be employed instead of nuclear power. Currently available solar and wind equipment would require approximately 40 square miles of land to produce 1000 MW of power. This is much larger than the area which will be disturbed by the proposed nuclear installation. Although this proceeding cannot properly consider a different type of power plant than the one proposed, the LARGE environmental impact of a comparable solar or wind installation would preclude their consideration on environmental grounds.

12/10/04

69 FR 71854

2. Solar and wind systems do not enjoy large economies of scale. Systems sized for individual homes or businesses are not much more expensive per kilowatt than large scale installations. Net metering of these sources is typically available, so that expensive battery systems are not required. Those individuals who wish to get their power from these sources are free to do so, without imposing additional costs on those Dominion ratepayers who cannot afford it.

3. Dominion has recently joined the PJM interconnect. This system operates under the principle of economic dispatch, wherein the power plants which are available at any given time are dispatched on the basis of lowest operating cost. Capital cost and rate base issues are not considered. Hydroelectric and nuclear plants are dispatched first because of their low operating cost, followed by coal, gas, and oil plants. Most time periods do not require running the highest cost sources (gas and oil). It is therefore reasonable to expect that a new nuclear plant will displace an equal amount of coal fired generation most of the time.

Since coal fired generation produces large amounts of NOx, SOx, lead, mercury, and other pollutants, the proposed plant will reduce such air and water pollution proportional to it's capacity. This reduced pollution may be reflected in air or water quality improvements around the proposed site, or in other areas of the state depending on the particular coal plant which is not dispatched on any given day.

Should the Commission determine that any of the potential environmental impacts are other than SMALL, it should take into account the positive, long term improvement in air and water quality that would ensue from the reduced operation of coal fired facilities to reduce the net impact.

4. Considerable discussion of striped bass is included in the assessment. Lake Anna was created by Dominion as a cooling water source for power plants. Bass are not a native species and are artificially introduced into the lake each year by state employees. Temperature effects on the bass population is not a proper subject for consideration in an EIS, since the artificial introduction of this species by a government agency is in fact a disturbance of the natural environment. Any incompatibility of such an artificially introduced species with the primary purpose of the body of water must be accounted for and managed by the agency introducing the species, and cannot properly be considered as an impact of the power plant.

E-RIDJ = ADM-03

Add J. Cushing (JXC9)

A. Williamson (ARW1)

SISP Review Complete

Template = ADM-03

5. Considerable discussion is made of temperatures at various locations in the lake. Fundamental thermodynamics indicates that the additional heat to be dissipated by a new power plant will be less than or equal to the flow rate of water that would need to be evaporated to produce an equivalent latent heat of vaporization. As long as the flow rate of water needed for total heat dissipation is less than the average flow rate into the lake, it is evident that water temperature deviations within reason can be managed by engineered structures.

If any lake temperature issues are evaluated to be other than SMALL, the licensee should be afforded an opportunity to address the particular local issue with additional engineered structures or systems.

Very truly yours,

Dwight Baker, PE

[\\_http://vbi.cumberlandfirst.net/cumberland-consulting/](http://vbi.cumberlandfirst.net/cumberland-consulting/)  
(<http://vbi.cumberlandfirst.net/cumberland-consulting/>)

**Mail Envelope Properties** (42239459.43C : 12 : 54332)

**Subject:** NUREG 1811 comments  
**Creation Date:** Mon, Feb 28, 2005 4:59 PM  
**From:** <DBakerPE@aol.com>

**Created By:** DBakerPE@aol.com

**Recipients**

nrc.gov  
owf4\_po.OWFN\_DO  
NorthAnna\_ESP

**Post Office**

owf4\_po.OWFN\_DO

**Route**

nrc.gov

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	4212	Monday, February 28, 2005 4:59 PM
TEXT.htm	5054	
Mime.822	10713	

**Options**

**Expiration Date:** None  
**Priority:** Standard  
**Reply Requested:** No  
**Return Notification:** None

**Concealed Subject:** No  
**Security:** Standard