New Nuclear Power Plants in Virginia

Dominion Power Plans Expansion at North Anna Nuclear Station

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June 2004
Dominion Virginia Power company took the first step in building a new nuclear power plant when it applied for a partial construction permit for North Anna in 2003.

This permit, called an early site permit or ESP, if approved, would give the company permission to use the site for two or more new nuclear reactors.

Dominion is asking to generate an additional 8,600 Megawatts-thermal of power.

Information from Dominion’s application which is available to the public at the Nuclear Regulatory Commission Public Electronic Reading Room on the Internet (ADAMS):

http://www.nrc.gov/reading-rm/adams.html

The accession number for the application is ML032731517. Persons who do not have access to the Internet, or who encounter problems in accessing the documents located in ADAMS, may contact the NRC Public Document Room staff toll-free by telephone at 1-800-397-4209 or by e-mail to pdr@nrc.gov
Facts About North Anna Nuclear Power Station

The North Anna nuclear station:

- Is 7 miles northeast of Mineral, 40 miles northwest of Richmond
- Is located on the North Anna River. The river is dammed to form Lake Anna which provides cooling water for the power plants.
- Is operated by Dominion Virginia Power
- Has two reactors—Unit 1 started in 1978, Unit 2 in 1980.
- Generates a total of 1,786 megawatts of electricity
What’s Wrong With Nuclear Power?

Severe Environmental Impacts

Nuclear reactors release tritium, iodine, cesium, and many other radioactive poisons into the air and water.

Carbon dioxide, sulfur dioxide, nitrogen oxides, and many other air pollutants are emitted by the mining of uranium ore for nuclear fuel. It takes a nuclear power plant from 10 to 18 years to make up for the energy lost in uranium mining. (Peer de Rijk, WISE)

Up to 2.5 billion gallons of water a day is used to keep a nuclear reactor cool. The waste water discharged is hotter than normal lake and stream water and contains toxic chemicals, solvents, and radioactive pollution. (Public Citizen)

Each nuclear power plant produces 20 to 30 tons of highly radioactive waste per year. Nationwide, tens of thousands of tons of highly toxic radioactive waste is stored at nuclear plants.
What’s Wrong With Nuclear Power?

**Serious Health Risks**

Children living near nuclear power plants suffer from higher levels of birth defects, cancer, and early death.

Studies at five U.S. nuclear plants found increased infant death rates in the surrounding communities.

The increased death rate began within two years after the plants opened. And soon after the reactors closed, infant deaths decreased by 15-20%.

For 7 years after these plants closed, cancer and birth defects continued to decrease.

Data from public health studies by the Radiation and Public Health Project published in the peer-reviewed scientific journal *Environmental Epidemiology and Toxicology*

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What’s Wrong With Nuclear Power?

Deceptive Advertising

The nuclear industry promotes nuclear power as a clean form of electricity. But the facts show otherwise:

The Better Business Bureau said advertising which says nuclear energy is “environmentally clean” is inaccurate and told the nuclear industry to stop making such claims.

The Better Business Bureau concluded that nuclear plants cause thermal water pollution and that the production of nuclear fuel causes air pollution. *

* The ruling came after a complaint was filed by a coalition of groups, including Public Citizen, who said the advertising was deceptive.
Timeline

September 25, 2003: the Dominion Virginia Power company applied for an early site permit for two or more new nuclear reactors at North Anna.

December 8, 2003: the Nuclear Regulatory Commission held a public hearing in Louisa County, Virginia on Dominion’s proposal.

January 2, 2004: The Blue Ridge Environmental Defense League, Public Citizen and Nuclear Information and Resource Service, petitioned the NRC to intervene in the early site permit process.

March 9, 2004: The Peoples Alliance for Clean Energy, founded to promote better energy alternatives and public health, joined with BREDL.

May 3, 2004: BREDL, Public Citizen and NIRS file legal arguments detailing six major flaws in Dominion’s permit application.

June 21-23, 2004: The Atomic Safety and Licensing Board will listen to arguments presented by our attorney and Dominion’s attorneys at NRC headquarters in Rockville, Maryland.

October 2004: The NRC plans to issue a Draft Environmental Impact Statement

December 2004: The NRC will hold a public meeting in Louisa County to receive comments on the Draft Environmental Impact Statement.

June 2005 The NRC plans to issue the Final Environmental Impact Statement and hold another public hearing.

mid-2006: NRC expects to make decision on issuing site permit

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What’s Wrong With Dominion’s Proposal to Expand North Anna?

**Not Enough Water in Lake Anna**

Cooling water for one new reactor would be “the single largest consumptive withdrawal ever considered in the history of the Virginia Water Protection Permit Program.” (p. 28)

Virginia DEQ states “The site is not suitable for the construction of two new reactors of the size proposed due to the lack of sufficient water resources.” (p. 29)

One new reactor would increase the water temperature in Lake Anna by 3.6 degrees. VDGIF states, “It is likely that even a small increase in reservoir water temperature would have a dramatic effect—further reducing the already limited habitat and perhaps jeopardizing the entire striped bass fishery.” (p. 35)

Page references cite May 3, 2004 Contentions filed by BREDL, Public Citizen and NIRS with the Nuclear Regulatory Commission.

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Safety and Security Problems

New reactor designs proposed for North Anna have less protection for control room personnel, putting them at risk of radiation exposure. (p. 6)

The proposed plants were designed before 9/11/01 and would not be adequately protected from terrorist attacks. (p. 10)

There is nowhere for the high-level nuclear waste fuel to be sent. (p. 16) Virginia nuclear plants already have 1,922 tons of nuclear waste in storage. (NEI)

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