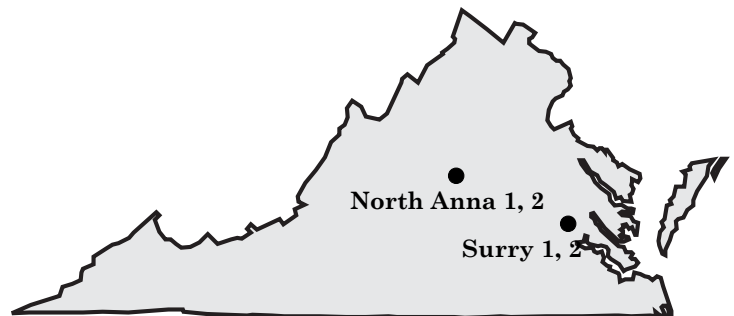


Nuclear Energy in Virginia

July 2009

Virginia's Electricity Generation

Nuclear	38.1%
Coal	43.7%
Oil	1.6%
Gas	13.0%
Hydro	-0.6%*
Renewable and Other	4.3%



Source: U.S. Energy Information Administration (EIA), 2008

*pumped storage may cause a negative generation



Nuclear Power Plants in the State

	City	Capacity (MW)	2008 Generation (MWh)	2006-2008 3-year Average Capacity Factor (%)
North Anna 1	Richmond	903	7,986,829	92.7
North Anna 2	Richmond	903	6,446,596	88.7
Surry 1	Newport News	799	6,890,502	92.3
Surry 2	Newport News	799	6,606,837	94.6
Total		3,404	27,930,764	92.1

Source: EIA

Clean Air and Economic Benefits

Economic Growth and Emission-Free Electricity

Virginia has experienced an average growth in gross state product of 2.1 percent per year over the past five years. To keep Virginia's economy growing, the state will need new sources of power. At the same time, parts of Virginia must deal with poor air quality. Emission-free sources, like nuclear power plants, supply safe, reliable and affordable power to meet the state's economic growth without polluting the air.

Status of the State's Air Quality

Counties near Washington, D.C., are in nonattainment status for the U.S. Environmental Protection Agency's new eight-hour ozone standard. Ozone contributes to smog, which can lead to asthma attacks and respiratory impairment in young children and the elderly. Virginia's nuclear power plants supply emission-free power statewide and help improve the air quality.

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Nuclear Energy Prevents Emissions

Generating electricity with nuclear energy prevents the emission of pollutants like sulfur dioxide (SO₂) and nitrogen oxides (NO_x) and greenhouse gases like CO₂ associated with burning fossil fuels. Virginia's nuclear power plants avoided the emission of 90,900 tons of SO₂, 27,100 tons of NO_x and 27.4 million metric tons of CO₂ in the year 2008 (*Source: NEI/EPA*). Emissions of SO₂ lead to the formation of acid rain. NO_x is a key precursor of both ground-level ozone and smog. Greenhouse gases like CO₂ contribute to global warming.

For perspective, the 27,100 tons of NO_x avoided by Virginia's nuclear power plants is the amount of NO_x released in a year by 1.4 million passenger cars. There are 4 million cars registered in the state of Virginia.

Potential Uprates at Nuclear Plants

With additional capital investment, more emission-free power can be generated at most existing nuclear power plants. This process of increasing power output capacity is called an "uprate." According to an analysis performed for the U.S. Department of Energy, an uprate at Virginia's nuclear power plants could supply 5 percent more electricity and avoid annual emissions of 2,900 tons of SO₂, 800 tons of NO_x and 1.0 million metric tons of CO₂.

New Nuclear Plants

The U.S. Energy Information Administration predicts that demand for energy will grow 21 percent by the year 2030. To meet this growing electricity demand in a manner that is cost effective and protects our air quality, energy companies are planning to build nuclear power plants to provide affordable electricity to consumers and prevent greenhouse gases. In Virginia, Dominion has filed a license application with the U.S. Nuclear Regulatory Commission to build one reactor in Louisa County. Upon completion, the plant will provide enough electricity to serve 1.2 million homes annually.

Economic Growth & Job Creation

Nuclear energy is one of the few bright spots in the U.S. economy because it creates more high-paying jobs than other sources of electricity and it helps stimulate the economy. On average, a nuclear power plant creates 1,400-1,800 high-paying jobs during construction, with peak employment estimated as high as 2,400 jobs during that period, and yields 400-700 jobs during the operation of the plant. Additionally, the average nuclear plant generates approximately \$430 million a year in total output for the local community and nearly \$40 million per year in total labor income.

In addition, two nuclear projects are in development in Virginia. AREVA and Northrop Grumman Shipbuilding are building a new manufacturing and engineering facility in Newport News to supply the growing American nuclear energy sector. The 300,000-square-foot facility represents an investment of more than \$360 million and will manufacture heavy components, such as reactor vessels, steam generators and pressurizers.

Babcock and Wilcox Nuclear Power Generation Group (B&W NPG) provides nuclear power plant products, services and construction for utilities worldwide. Headquartered in Lynchburg, Va., the new company focuses on current and future needs of existing nuclear plants and provides capabilities to support construction of new plants. B&W NPG's primary capabilities include design engineering, manufacturing, field service and construction.

Both projects will create an estimated 600 new jobs.

This fact sheet is available at www.nei.org, where it is updated periodically.