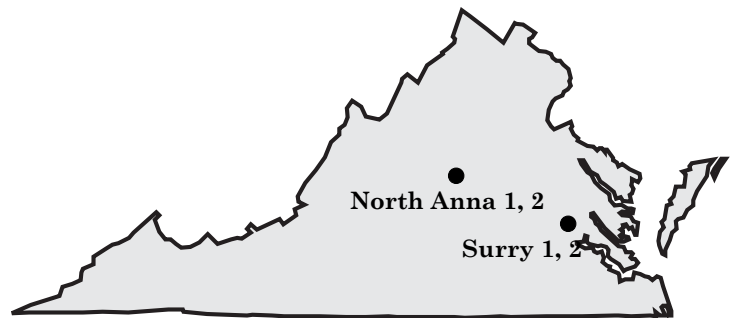


Nuclear Energy in Virginia

July 2007

Virginia's Electricity Generation

Nuclear	38.1%
Coal	47.3%
Oil	1.1%
Gas	9.9%
Hydro	-0.5%*
Renewable and Other	4.0%



Source: EIA, 2006

*pumped storage may cause a negative generation



Nuclear Power Plants in the State

	City	Capacity (MW)	2006 Generation (MWh)	2004-2006 3-year Average Capacity Factor (%)
North Anna 1	Richmond	924	7,142,736	91.6
North Anna 2	Richmond	910	7,950,422	93.0
Surry 1	Newport News	799	6,311,001	92.9
Surry 2	Newport News	799	6,189,357	93.8
Total		3,432	27,593,516	92.8

Source: Energy Information Administration

Clean Air Benefits

Economic Growth and Emission-Free Electricity

Virginia has experienced average growth in Gross State Product of 3.3 percent per year over the past 5 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

All counties are in attainment for EPA's new 8-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 and help improve the air quality.

Nuclear Energy in Virginia

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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 154,100 tons of SO₂, 43,300 tons of NO_x and 27.3 million metric tons of CO₂ in the year 2006. (*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 43,300 tons of NO_x avoided is the amount of NO_x released in a year by 2.3 million passenger cars. There are

only 4.1 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 five percent more electricity and avoid annual emissions of 3,900 tons of SO₂, 900 tons of NO_x and 1.0 million metric tons of CO₂.

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