

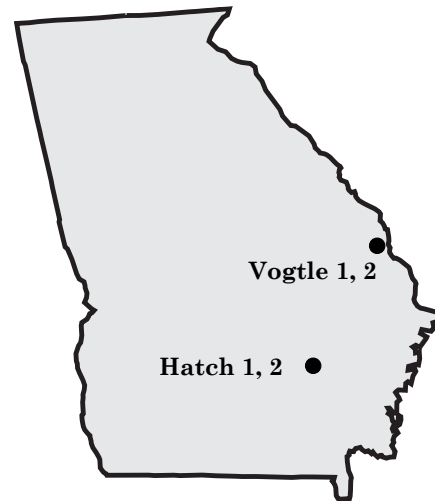
## Nuclear Energy in Georgia

July 2009

### Georgia's Electricity Generation

Nuclear	23.1%
Coal	62.9%
Oil	0.2%
Gas	9.8%
Hydro	1.6%
Renewable and Other	2.4%

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



### Nuclear Power Plants in the State

	City	Capacity (MW)	2008 Generation (MWh)	2006-2008 3-year Average Capacity Factor (%)
Edwin I. Hatch 1	Baxley	876	6,433,742	88.3
Edwin I. Hatch 2	Baxley	883	7,479,800	94.2
Vogtle 1	Waynesboro	1,109	9,050,426	92.5
Vogtle 2	Waynesboro	1,127	8,727,127	87.7
<b>Total</b>		<b>3,995</b>	<b>31,691,095</b>	<b>90.7</b>

Source: EIA

### Clean Air and Economic Benefits

#### *Economic Growth and Emission-Free Electricity*

Georgia has experienced an average growth in gross state product of 1.2 percent per year over the past five years. To keep Georgia's economy growing, the state will need new sources of power. At the same time, parts of Georgia 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 in nonattainment for the U.S. Environmental Protection Agency's particulate matter (PM) 2.5 and eight-hour ozone standards make up the Atlanta, Rome and Macon areas. Ozone contributes to smog, which along with PM 2.5 can lead to asthma attacks and respiratory impairment in young children and the elderly. Georgia's nuclear power plants supply emission-free power much of the state and help improve the air quality.

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## **Nuclear Energy in Georgia**

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### ***Nuclear Energy Prevents Emissions***

Generating electricity with nuclear energy prevents the emission of pollutants like sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) and greenhouse gases like CO<sub>2</sub> associated with burning fossil fuels. The nuclear power plants in Georgia avoided the emission of 145,000 tons of SO<sub>2</sub>, 37,000 tons of NO<sub>x</sub> and 27 million metric tons of CO<sub>2</sub> in the year 2008 (*Source: NEI/EPA*). Emissions of SO<sub>2</sub> lead to the formation of acid rain. NO<sub>x</sub> is a key precursor of both ground-level ozone and smog. Greenhouse gases like CO<sub>2</sub> contribute to global warming.

For perspective, the 37,000 tons of NO<sub>x</sub> avoided by the nuclear power plants in Georgia is the amount of NO<sub>x</sub> released in a year by 2 million passenger cars. There are 4.2 million cars registered in the state of Georgia.

### ***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, uprates at Georgia’s nuclear power plants could supply 2 percent more electricity and avoid annual emissions of 1,400 tons of SO<sub>2</sub>, 420 tons of NO<sub>x</sub> and 500,000 metric tons of CO<sub>2</sub>.

### ***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 Georgia, Southern Company has filed a license application with the U.S. Nuclear Regulatory Commission to build two reactors in Burke County. Upon completion, the plants will provide enough electricity to serve 1.6 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 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.

*This fact sheet is available at [www.nei.org](http://www.nei.org), where it is updated periodically.*