

## Nuclear Energy in Mississippi

July 2009

### Mississippi's Electricity Generation

Nuclear	19.4%
Coal	34.6%
Oil	0.2%
Gas	42.7%
Hydro	0.0%
Renewable and Other	3.1%

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 (%)
Grand Gulf 1	Port Gibson	1,268	9,396,790	87.6

Source: EIA

### Clean Air and Economic Benefits

**Economic Growth and Emission-Free Electricity**  
Mississippi has experienced an average growth in gross state product of 1.1 percent per year over the past five years. To keep Mississippi's economy growing, the state will need new sources of power. Emission-free sources, like nuclear power plants, supply safe, reliable and affordable power to meet the state's economic growth without polluting the air.

### 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. Grand Gulf avoided the emission of 12,200 tons of SO<sub>2</sub>, 8,700 tons of NO<sub>x</sub> and 7 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.

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For perspective, the 8,700 tons of NO<sub>x</sub> avoided by the nuclear power plant in Mississippi is the amount of NO<sub>x</sub> released in a year by 454,000 passenger cars. There are about 1.1 million cars registered in the state of Mississippi.

## ***Potential Upgrades 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 “upgrade.” According to an analysis performed for the U.S. Department of Energy, an upgrade at Grand Gulf could supply 19 percent more electricity and avoid annual emissions of 4,300 tons of SO<sub>2</sub>, 1,200 tons of NO<sub>x</sub> and 1.5 million 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 Mississippi, Entergy has filed a license application with the U.S. Nuclear Regulatory Commission to build at least one reactor in Claiborne County. Upon completion, the plant will provide enough electricity to serve 1 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.*