

Nuclear Energy in Louisiana

July 2009

Louisiana's Electricity Generation

Nuclear	16.7%
Coal	28.2%
Oil	0.3%
Gas	50.2%
Hydro	1.2%
Renewable and Other	3.4%

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 (%)
River Bend	St. Francisville	970	6,333,865	82.4
Waterford 3	Taft	1,157	9,037,123	92.9
Total		2,127	15,370,988	87.7

Source: EIA

Clean Air and Economic Benefits

Economic Growth and Emission-Free Electricity
Louisiana has experienced an average growth in gross state product of 0.8 percent per year over the past five years. To keep Louisiana's economy growing, the state will need new sources of power. At the same time, parts of Louisiana 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

The parishes that make up the Baton Rouge area are in nonattainment 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. Louisiana's nuclear power plants supply emission-free power to Baton Rouge and the rest of the state helping to 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. The nuclear power plants in Louisiana avoided the emission of 20,000 tons of SO₂, 14,100 tons of NO_x and 11.5 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 14,100 tons of NO_x prevented by the nuclear power plants in Louisiana is the amount of NO_x released in a year by 742,000 passenger cars. There are nearly 2 million cars registered in the state of Louisiana.

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 Louisiana’s nuclear power plants could supply 3 percent more electricity and avoid annual emissions of 1,000 tons of SO₂, 300 tons of NO_x and 39,000 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 Louisiana, Entergy has filed a license application with the U.S. Nuclear Regulatory Commission to build at least one reactor in West Feliciana Parish. 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 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, one new nuclear project is in development in Louisiana. Global Modular Solutions, a joint venture of Shaw Group and Westinghouse, is building a 600,000-square-foot module fabrication facility at the Port of Lake Charles to produce structural, piping and equipment modules for new nuclear plants using the Westinghouse AP1000 technology. The new facility is scheduled to open in the summer of 2009 and will create approximately 1,400 new jobs.

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