

## Nuclear Energy in New Jersey

July 2009

### New Jersey's Electricity Generation

Nuclear	50.4%
Coal	14.6%
Oil	0.5%
Gas	32.7%
Hydro	-0.4%*
Renewable and Other	2.2%

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 (%)
Hope Creek Lower Alloways Creek	1,061	9,992,387	95.6
Oyster Creek Lacey Township	619	4,664,005	88.4
Salem 1 Lower Alloways Creek	1,174	9,327,413	93.0
Salem 2 Lower Alloways Creek	1,130	8,210,993	90.9
<b>Total</b>	<b>3,984</b>	<b>32,194,798</b>	<b>91.9</b>

Source: EIA

### Clean Air and Economic Benefits

#### Economic Growth and Emission-Free Electricity

New Jersey has experienced an average growth in gross state product of 0.8 percent per year over the past five years. To keep New Jersey's economy growing, the state will need new sources of power. At the same time, New Jersey 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

New Jersey counties in the New York City 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. The Hope Creek, Oyster Creek and Salem plants supply emission-free power to New Jersey homes and businesses while helping to improve the air quality.

SUITE 400  
1776 I STREET, NW  
WASHINGTON, DC  
20006-3708  
202.739.8000  
www.nei.org

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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. New Jersey's nuclear power plants avoided the emission of 171,000 tons of SO<sub>2</sub>, 48,200 tons of NO<sub>x</sub> and 28.9 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 48,200 tons of NO<sub>x</sub> avoided by nuclear power plants in New Jersey is the amount of NO<sub>x</sub> released in a year by 2.5 million passenger cars. There are 3.8 million cars registered in the state of New Jersey.

## ***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 New Jersey's nuclear power plants could supply 3 percent more electricity and avoid annual emissions of 2,900 tons of SO<sub>2</sub>, 700 tons of NO<sub>x</sub> and 880,000 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 New Jersey, PSEG is evaluating whether to build at least one additional reactor in Lower Alloways Creek. Upon completion, the plant would 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.*