

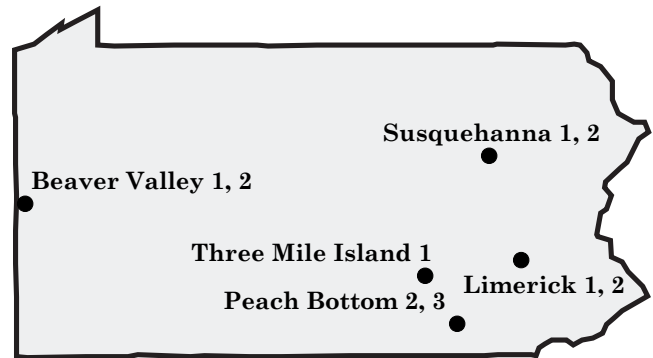
## Nuclear Energy in Pennsylvania

July 2009

### Pennsylvania's Electricity Generation

Nuclear	35.3%
Coal	53.0%
Oil	0.3%
Gas	8.8%
Hydro	0.9%
Renewable and Other	1.6%

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 (%)
Beaver Valley 1	Shippingport	892	7,944,938	91.5
Beaver Valley 2	Shippingport	846	6,726,198	93.2
Limerick 1	Limerick Township	1,134	9,345,494	95.9
Limerick 2	Limerick Township	1,134	9,701,768	96.2
Peach Bottom 2	Peach Bottom Township	1,112	8,716,608	94.5
Peach Bottom 3	Peach Bottom Township	1,112	9,818,175	98.3
Susquehanna 1	Berwick	1,149	8,983,811	90.1
Susquehanna 2	Berwick	1,140	10,056,003	93.6
Three Mile Island 1	Londonderry Township	786	7,365,098	102.7
<b>Total</b>		<b>9,305</b>	<b>78,658,093</b>	<b>95.1</b>

Source: EIA

### Clean Air and Economic Benefits

**Economic Growth and Emission-Free Electricity**  
 Pennsylvania has experienced an average growth in gross state product of 1.3 percent per year over the past five years. To keep Pennsylvania's economy growing, the state will need new sources of power. At the same time, parts of Pennsylvania 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 new eight-hour ozone standard make up the Harrisburg, Philadelphia, and Pittsburgh areas. Ozone contributes to smog, which can lead to asthma attacks and respiratory impairment in young children and the elderly. Pennsylvania's nuclear power plants supply emission-free power to these metropolitan areas and help 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 (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 Pennsylvania avoided the emission of 417,700 tons of SO<sub>2</sub>, 117,700 tons of NO<sub>x</sub> and 70.7 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.

For perspective, the 117,700 tons of NO<sub>x</sub> emissions prevented by nuclear plants in Pennsylvania is the amount of NO<sub>x</sub> released in a year by 6.2 million passenger cars. There are only 5.8 million cars registered in the state of Pennsylvania.

## ***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 Pennsylvania’s nuclear power plants could supply 4 percent more electricity and prevent annual emissions of 9,700 tons of SO<sub>2</sub>, 2,200 tons of NO<sub>x</sub> and 3 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 Pennsylvania, PPL

Corp./UniStar has filed a license application with the U.S. Nuclear Regulatory Commission to build one reactor in Luzerne County. Upon completion, the plant will provide enough electricity to serve 1.2 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.

In addition, three new nuclear projects are planned in Pennsylvania. Holtec manufactures dry fuel storage canisters and high-tech racks for electric utilities in the United States and around the world. In 2008, Holtec added 90,000 square feet to its manufacturing division in Turtle Creek. Curtiss Wright Flow Control Corp. is building a \$62 million, state-of-the-art, multipurpose large manufacturing complex in Cheswick. The facility will be used to build commercial nuclear reactor coolant pumps as well as support the production and testing of other new large products. Westinghouse is nearing completion of a new facility in Cranberry Woods that will house the company’s Nuclear Power Plant business unit. These three projects will create nearly 1,600 new jobs.

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