

Nuclear Energy in Ohio

July 2009

Ohio's Electricity Generation

Nuclear	11.4%
Coal	86.0%
Oil	0.2%
Gas	1.7%
Hydro	0.3%
Renewable and Other	0.3%



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 (%)
Davis-Besse	Oak Harbor	879	6,823,285	89.7
Perry 1	North Perry	1,245	10,690,593	89.9
Total		2,124	17,513,878	89.8

Source: EIA

Clean Air and Economic Benefits

Economic Growth and Emission-Free Electricity
Ohio has experienced an average growth in gross state product of -0.1 percent per year over the past five years. To get Ohio's economy growing, the state will need new sources of power. At the same time, parts of Ohio 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 new eight-hour ozone standards make up the Akron, Canton, Cincinnati, Cleveland, Columbus, and Dayton 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. Davis-Besse and Perry nuclear power plants supply emission-free power to the northern part of the state 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 (SO₂) and nitrogen oxides (NO_x) and greenhouse gases like CO₂ associated with burning fossil fuels. Davis-Besse and Perry avoided the emission of 78,400 tons of SO₂, 26,300 tons of NO_x and 17.5 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 26,300 tons of NO_x avoided by the nuclear power plants in Ohio is the amount of NO_x released in a year by 1.4 million passenger cars. There are 6.4 million cars registered in the state of Ohio.

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, upgrades at Davis Besse and Perry could supply 8 percent more electricity and avoid annual emissions of 3,700 tons of SO₂, 1,000 tons of NO_x and 1.2 million 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.

The Southern Ohio Clean Energy Park Alliance announced plans in June 2009 for a new nuclear plant in Piketon. The group, Duke Energy, AREVA, UniStar Nuclear Energy, USEC and the Southern Ohio Diversification Initiative, has not yet submitted a combined construction and operating license application, but is undertaking the necessary planning for a 10-year construction and licensing process.

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, another new nuclear project is in development in Ohio. USEC began construction on the American Centrifuge Plant in 2007 in Piketon and expects to begin commercial operations in 2010 and continue to expand capacity through 2012. The plant is expected to cost \$3.5 billion and will create approximately 6,300 total direct and indirect jobs at the site and at suppliers and manufacturers across the country.

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