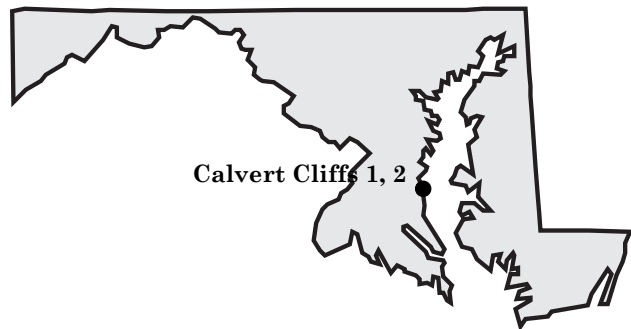


## Nuclear Energy in Maryland

July 2007

### Maryland's Electricity Generation

Nuclear	28.4%
Coal	60.3%
Oil	1.2%
Gas	3.9%
Hydro	4.3%
Renewable and Other	1.9%



Source: EIA, 2006

### Nuclear Power Plants in the State

	City	Capacity (MW)	2006 Generation (MWh)	2004-2006 3-year Average Capacity Factor (%)
Calvert Cliffs 1	Lusby	873	6,438,340	91.7
Calvert Cliffs 2	Lusby	862	7,392,071	97.2
<b>Total</b>		<b>1,735</b>	<b>13,830,411</b>	<b>94.5</b>

Source: Energy Information Administration

### Clean Air Benefits

**Economic Growth and Emission-Free Electricity**  
 Maryland has experienced an average growth in Gross State Product of 3.1 percent per year over the past 5 years. To keep Maryland's economy growing, the state will need new sources of power. At the same time, parts of Maryland 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 non-attainment for EPA's new 8-hour ozone standard surround Baltimore and Washington, DC-MD-VA. Ozone contributes to smog, which can lead to asthma attacks and respiratory impairment in young children and the elderly. Calvert Cliffs supplies emission-free power to these cities and helps improve the air quality.

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# **Nuclear Energy in Maryland**

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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 Calvert Cliffs plants avoided the emission of 101,400 tons of SO<sub>2</sub>, 18,800 tons of NO<sub>x</sub> and 12.0 million metric tons of CO<sub>2</sub> in the year 2006. (*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 18,800 tons of NO<sub>x</sub> avoided by Calvert Cliffs is the amount of NO<sub>x</sub> released in a year by 1.0 million

passenger cars. There are 2.6 million cars registered in the state of Maryland.

## ***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 Calvert Cliffs could supply five percent more electricity and avoid annual emissions of 3,000 tons of SO<sub>2</sub>, 500 tons of NO<sub>x</sub> and 570,000 metric tons of CO<sub>2</sub>.

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