

Nuclear Power Needed to Meet Nation's Future Energy and Environment Needs

Exelon operates the largest fleet of nuclear power plants in the United States and the third largest worldwide. It owns and operates 17 units at 10 sites in three states: six in Illinois, three in Pennsylvania and one in New Jersey. The company consistently ranks among the top nuclear operators in terms of reliability, safety and low cost.

Exelon supports the growing belief that nuclear power has an important role in the future energy supply for the nation and the world, particularly with increased concerns about global warming. Exelon supports national policies and legislation that will encourage the continued and extended operation of existing plants as well as the construction of new plants.

Environmental Benefits of Nuclear Power

- Nuclear power emits virtually no greenhouse gases, making it a clean power source that can help address global warming. Nuclear energy accounted for about 71 percent of U.S. emission-free power generation in 2006.
- The United Nations Intergovernmental Panel on Climate Change issued a report in May 2007 recognizing the role of nuclear power in reducing greenhouse gases. The report makes it clear that nuclear power, in combination with renewable energy sources such as solar and wind, must play a role to significantly reduce emissions in the energy sector.
- Nuclear energy makes unnecessary the emission of more than 2 billion metric tons of carbon dioxide per year worldwide, and nearly 700 million metric tons of carbon dioxide per year in the U.S. – the approximate equivalent of taking 96 percent of all passenger cars off America's roads.

Nuclear Power is Economic, Efficient and Reliable

- The United States will need 45 percent more electricity by 2030—almost 350,000 megawatts of new electric generating capacity, according to the Department of Energy.
- Nuclear power plants, unlike intermittent sources of renewable energy, can produce electricity on average 90 percent of the time because they can operate in all weather conditions. In the United States, hydro produces electricity from 30 to 38 percent of the time, and wind about 25 to 30 percent of the time.
- In 2006, Exelon Nuclear generated a record amount of electricity - 131.4 billion net kilowatt hours— and averaged a capacity factor of 93.9 percent, well above the industry average of 89.1 percent.
- Nuclear can produce more electricity with less fuel than other energy sources. One uranium fuel pellet, the size of the tip of your little finger, is the energy equivalent of 17,000 cubic feet of natural gas, 1,780 pounds of coal or 149 gallons of oil.

- Nuclear energy is more economical than other major energy sources. In the United States, nuclear energy has the lowest average electricity production cost of any major energy source. In 2005, electricity production costs per kilowatt-hour totaled:
 - 1.72 cents for nuclear
 - 2.21 cents for coal
 - 7.51 cents for natural gas
 - 8.09 cents for oil

Exelon's Nuclear production cost in 2005 was 1.3 cents per kilowatt-hour.

New Initiatives for Nuclear Power Development

- Exelon believes that 20 to 30 new nuclear plants will be needed by 2030 in order to address climate change and enhance energy security.
- About 19 companies or consortia, including Exelon, have announced plans to file applications with the Nuclear Regulatory Commission for combined construction and operating licenses by the end of 2009. This represents an important first step toward new plants in the United States and could result in the construction of as many as 34 nuclear power plants.
 - Exelon intends to file a combined construction and operating license for a single unit in Texas by the end of 2008.
 - Exelon received approval in March for an early site permit at its Clinton Station in DeWitt County, Illinois -- the first permit of its kind granted in the industry. The permit is valid for up to 20 years.
- While Exelon is taking steps to maintain the option to build a new nuclear plant, certain conditions would be required before Exelon would actually build:
 - The federal government must take title of spent fuel and move it from reactor sites to interim or permanent storage facilities.
 - Public policy in the states and communities Exelon serves must welcome a new plant.
 - The right reactor technology. Exelon believes there must be passive designs that are simpler to operate than current technology and incorporate the latest safety technology and anti-terrorism protections.
 - The economics must be right; the regulatory environments must be stable and predictable.