Nuclear Powers Illinois

Reliable Energy, Jobs, and Clean Air for Illinois
About Exelon

One of the largest U.S. competitive power generators
35,000 MW of owned capacity
Largest U.S. nuclear fleet
Diversified portfolio with 10 fuel sources, including hydro, wind and solar

Retail and wholesale sales through Constellation
More than 100,000 business and public sector customers
Approximately 1 million residential and small business customers

Three utilities delivering electricity and natural gas to more than 7.8 million customers:
• BGE in Maryland
• ComEd in Illinois
• PECO in Pennsylvania
Exelon’s Nuclear Fleet

Exelon Generation operates the largest fleet of commercial nuclear power plants in the nation with 23 nuclear reactors at 14 sites in six states.
A Snapshot of Illinois Nuclear Facilities

In Illinois, Exelon Generation operates 11 reactors at six plants - the largest generator of clean 24/7 power.

✓ Produces almost half (48%) of Illinois’ total electricity and 90% of its carbon free power.¹

Nuclear energy facilities generate enough round-the-clock electricity to supply the needs of more than

7 MILLION ILLINOIS RESIDENTS.

Illinois’ nuclear plants are vital to the state and provide tremendous benefits to Illinois families and communities.

These facilities:

- Employ 5,900 workers.
- Create more than 21,700 additional jobs in other industries in Illinois.
- Employ another 1,400 temporary workers for each Illinois plant refueling outage (4-5 a year).
- Pay more than $290 million in local and state taxes to fund schools, parks, libraries, first responders and other public necessities.

Source: NEI, the Impact of Exelon’s Nuclear Fleet on the Illinois Economy
Generating Reliable Power

Illinois’ families, communities and businesses depend on the reliable electricity provided by its nuclear plants.

- Exelon’s nuclear plants operate a 96% efficiency regardless of weather or time of day, going offline to refuel every 18-24 months.
- This kind of reliable base-load output is not provided by any other “always on” generation source.

92% said ...

“Nuclear energy is important to meeting our nation’s energy needs”

2013 National Nuclear Plant Neighbor Survey of Exelon’s Illinois nuclear fleet, Bisconti Research Inc.

U.S. Capacity Factors by Fuel Type (2013)¹
Average Capacity Percentage

- Oil - 13%
- Gas (Steam Turbine) - 12%
- Solar - 24%
- Wind - 32%
- Hydro - 40%
- Coal - 59%
- Gas (Combined Cycle) - 50%
- Biomass - 67%
- Geothermal - 67%
- Nuclear - 91%
- Exelon Illinois Nuclear - 96%

¹ Source: Ventyx Velocity Suite / Energy Information Administration Updated: 4/14
Generating Clean Power

Nuclear plants in Illinois provide emissions free power and will be critical to Illinois’ compliance with EPA’s limits on carbon emissions.

- Nuclear plants run reliably with no carbon emissions. Wind and other solar resources are “intermittent” generators.

- In 2013, Exelon’s Illinois nuclear plants produced 97,131 GWh of sustained electricity – that’s 10 times more electricity than all Illinois wind farms combined.

- In 2013, all Illinois wind assets produced 9,602 GWh of intermittent electricity.

Carbon-free electricity from Illinois’ nuclear energy facilities prevents the release of nearly 80 million metric tons of carbon dioxide annually, the equivalent of taking more than 15 MILLION CARS OFF THE ROAD.
An Unrivaled Environmental Asset for Illinois

Nuclear plants in Illinois lead the nation in providing emissions free power and will be critical to Illinois’ compliance with EPA’s limits on carbon emissions.

✓ New Environmental Protection Agency (EPA) proposed rules call for reductions in carbon emissions from existing power plants and encourage states, including Illinois, to adopt policies to discourage the loss of existing nuclear plants because of their environmental benefits.

✓ Closure of Illinois’ nuclear facilities will result in significant increases in carbon and other pollutants and making it difficult for Illinois to comply with these new rules.

90% of Illinois’ carbon-free power produced by nuclear energy facilities.
Protecting the Environment

Exelon’s Illinois nuclear plants enhance and protect the environment with programs that have improved water quality and the health of habitats for fish, birds and other wildlife.

- Dresden Station has built more than 60 artificial nesting areas for osprey and purple martins on the site’s property.

- Quad Cities Station is home to the only private fish hatchery on the Mississippi River, introducing more than 6 million game fish into the river.

- Braidwood Station’s award-winning fish management initiative includes more than 500 artificial habitats deployed to create a thriving ecosystem.

86% said …

“Exelon Nuclear protects the environment”

2013 National Nuclear Plant Neighbor Survey of Exelon’s Illinois nuclear fleet, Bisconti Research Inc.
Today’s Challenge

Illinois nuclear plants face a perfect storm of challenges that threaten their continued operation.

- Lack of fair compensation for zero carbon pollution characteristic
- Glut of natural gas production
- Counterproductive federal energy policies and market rules
- Billions of dollars in market-distorting federal subsidies
- Load growth that is down or flat
- Transmission constraints and lack of transmission investment
- Lack of fair compensation for always-on, reliable power

Challenges for Illinois Nuclear Fleet

Three nuclear facilities are at-risk of closing prematurely, leading to significant economic and environmental consequences for our state.

Half of Illinois’ energy comes from our state’s reliable nuclear power plants, but some of these plants are at risk of closing. What will it cost Illinois if three of its nuclear plants close?

According to a State of Illinois Report*

- **Up to 8,000 jobs lost**
- **Up to $1.8B lost** in economic activity
- **Up to 10% ($4.37B)** wholesale price increases
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$2.5B – $18.6B IN ECONOMIC DAMAGES ASSOCIATED WITH AN INCREMENTAL INCREASE IN THE RELEASE OF CARBON DIOXIDE EMISSIONS IN A GIVEN YEAR

UP TO 38.7M METRIC TONS OF ADDED CO₂ POLLUTION IN THE YEAR 2025
The Low Carbon Portfolio Standard (LCPS) will preserve the state’s existing low carbon energy sources and advance Illinois’ position as a clean energy leader.

**WHAT IS A LOW CARBON PORTFOLIO STANDARD?**

The LCPS would require all Illinois electric utilities to purchase a specified percentage of low carbon energy credits from energy sources that emit zero or low amounts of carbon dioxide. Low carbon energy sources include wind, solar, hydro, tidal, wave, clean coal, and nuclear.

**HOW DOES A LOW CARBON PORTFOLIO STANDARD WORK?**

Beginning in 2016, the LCPS would require Illinois’ electric utilities to obtain low carbon energy credits to match an amount equal to 70% of the electricity used on the distribution system. The electric utilities would rely upon the Illinois Power Agency to develop an open, transparent, and competitive process to obtain low carbon energy credits.
Benefits of the Illinois Low Carbon Portfolio Standard

The LCPS is part of an all-of-the-above energy strategy that will help reduce carbon emissions and deliver benefits for the entire state. Here are the key benefits of establishing the LCPS:

AN INCREASE IN RENEWABLE ENERGY WHILE MAINTAINING EXISTING LOW-CARBON SOURCES OF ENERGY SUCH AS NUCLEAR POWER.

- Under the proposal, electric utilities would be required to purchase low carbon energy credits in an amount equal to 70% of the electricity used on its transmission and distribution system.

- Up until now, nuclear energy facilities, which provide 90% of Illinois’ carbon free power, have not been valued for the carbon free electricity they generate. The Low Carbon Portfolio Standard corrects this flaw in Illinois’ energy policy and helps preserve these facilities, some of which are at risk of premature closure.
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A COST-EFFECTIVE AND MARKET-BASED SOLUTION WITH STRONG CONSUMER PROTECTIONS.

• The LCPS is technology-neutral and rewards all low carbon resources equally within a competitive market framework.

• The legislation includes consumer protections such as a price cap to limit the consumer impact to a 2.015% annual increase over 2009 retail prices, or about $2 per month for the average Illinois residential electricity customer (less than would occur if some of Illinois’ nuclear plants were to close early).

• The legislation also includes a separate customer rebate provision that would provide a direct bill credit to customers in the event wholesale prices exceed a specified level. This type of customer protection does not exist under other clean energy programs.
The LCPS is part of an all-of-the-above energy strategy that will help reduce carbon emissions and deliver benefits for the entire state. Here are the key benefits of establishing the LCPS:

A BRIDGE TO COMPLY WITH THE U.S. EPA’S CLEAN POWER PLAN.

• The LCPS will help maintain existing sources of low carbon energy while Illinois determines how best to meet the EPA’s ambitious goal of reducing carbon emissions from power plants by 30 percent from 2005 levels by the year 2030.

• The legislation includes a provision that the program will sunset on the later of Dec. 31, 2021, or once Illinois has implemented a compliance program pursuant to Section 111(d) of the federal Clean Air Act.
Campaign Tools

✓ Exelon launched *Nuclear Powers Illinois*, an advocacy campaign to support the state’s existing nuclear facilities

✓ Learn more:

  • [www.nuclearpowersillinois.com](http://www.nuclearpowersillinois.com)
  • [www.facebook.com/nuclearpowersIL](http://www.facebook.com/nuclearpowersIL)
  • [www.twitter.com/nuclearpowersIL](http://www.twitter.com/nuclearpowersIL)
Thank You! Questions?