

Smart Grid Facts & Figures

Smart grid refers to a **next-generation electric grid** that allows electricity suppliers and consumers to share information in real time, using information technology, to maximize energy efficiency, accommodate all generation and storage options and anticipate and respond to system disturbances in a self-healing manner.

The market for smart grid enabling technologies to grow to **\$171 billion by 2014**, up from \$70 billion in 2009. (*SBI Energy*)

Smart grid technologies have the potential to create new, green economy jobs. For example:

- Up to **280,000 new jobs** can be created nationally directly from the deployment of smart grid technologies, in addition to enabling a substantial number of indirect jobs through the deployment of new technologies. (*GridWise Alliance*)
- Every **\$1 billion** of investment in smart grid technology is projected to propel **\$100 billion in GDP growth**. (*Apollo Alliance*)

Clean-energy investments create **16.7 jobs for every \$1 million** in spending; investing in fossil fuels, by contrast, generates 5.3 jobs per \$1 million in spending. Illinois could see a net increase of about \$6.6 billion in investment revenue and 70,000 jobs based on its share of a total of \$150 billion in annual national clean-energy investments. (*Center for American Progress*)

Smart grid also has the potential to produce **climate benefits**. As old buildings become more energy efficient, clean energy sources — wind, solar and hydroelectric power — are integrated into a smarter electric grid and electric vehicles are adopted.

Illinois is home to over **2,000 megawatts** of wind generation capacity, which is enough to power more than 600,000 homes with clean, emissions-free electricity. (*Illinois Wind Energy Association*)

In the U.S., buildings account for **38%** of all CO₂ emissions. Buildings also represent **72%** of U.S electricity consumption. (*U.S. Green Building Council*)

As the result of the Chicago Climate Action Plan, the city has **retrofitted** almost 15,000 dwelling units and 400 commercial and industrial buildings for energy efficiency. Two hundred buildings have also been permitted under the new Chicago energy code since April 2009. (*City of Chicago*)

Advanced meters reached **8.7 percent** of the country in 2010, up from 4.7 percent in 2008. (FERC)

Illinois: A Center for Smart Grid

The Illinois Science & Technology Coalition leads a working group to identify key opportunities for collaboration and investment both domestically and globally. The goal is to speed the development and deployment of smart grid technologies in Illinois and create jobs. Our partners include: the State of Illinois, Illinois Department of Commerce and Economic Opportunity, City of Chicago, Citizens Utility Board, ADICA LLC, University of Illinois, Illinois Institute of Technology, Illinois Commerce Commission, Building Owners and Managers Association of Chicago, Metropolitan Energy and TechAmerica Midwest, among others.

Did You Know?

In 2000, the one-hour outage that hit the Chicago Board of Trade resulted in \$20 trillion in trade delayed.

The Northeast blackout of 2003 resulted in a \$6 billion economic loss to the region.

If the power grid were just 5% more efficient, the energy savings would equate to permanently eliminating the fuel and greenhouse gas emissions for 53 million cars.

A recent U.S. Energy report suggests that 100 percent penetration of smart grid technology in the United States could lead to an 18 percent reduction in carbon dioxide emissions by 2030 in the country.

Chicago has more LEED certified buildings than any other city in the United States.

An upfront investment of 2% in green building design, on average, results in life cycle savings of 20% of the total construction costs – more than ten times the initial investment.

*Sources U.S. Department of Energy,
U.S. Green Building Council*