

- Clean energy refers to sources that have a reduced environmental foot print, address the increasing global demand for energy, and enhance the ability of the U.S. to achieve energy independence. Clean energy encompasses renewable sources, conservation and efficiency efforts and enabling technologies, such as batteries, energy efficient appliances and windows. *(MIT Clean Energy Competition)*
- Clean energy has the potential to create jobs, protect our environment and facilitate energy independence. According to the Center for American Progress, for every \$1 million spent on clean energy investments, 16.7 jobs would be created.
- Expanding clean energy and improving reliability and energy transmission are top priorities of both President Obama's Administration and the State of Illinois. The American Recovery and Reinvestment Act provides \$60 billion in clean energy investments including:
  - \$6.3 billion for state and local renewable energy and energy efficiency efforts.
  - Over \$4 billion for Smart Grid technology development and demonstration projects.
  - \$2 billion in grants for the manufacturing of advanced batteries and components.
  - \$1.52 billion for a two-part competitive grant for large-scale carbon capture and storage technology from industrial sources.
- In 2007, the State of Illinois adopted a Renewable Energy Standard (RES) and an Energy Efficiency Portfolio Standard:
  - Utilities in Illinois must produce increasing percentages of their power from renewable sources, starting with 2 percent in 2008 and reaching 25 percent by 2025.
  - Seventy-five percent of the electricity used to meet the renewable standard must come from wind power generation; other eligible electricity resources include solar, biomass, and existing hydropower sources.
  - Utilities must also implement cost-effective energy efficiency measures to reduce electric usage by 2 percent of demand by 2015. *(Public Act 095-0481)*
- Increasing investment in clean energy resources, energy efficiency, combined heat and power, and coal-fired Integrated Gasification Combined Cycle would increase total economic output in Illinois by \$4.7 billion by 2012 and by \$18 billion by 2020, and would increase income for Illinois residents by \$5.5 billion by 2020. It would also result in the creation of 191,000 new jobs in Illinois by 2020. *(Energy Resources Center, University of Illinois at Chicago)*
- Illinois is a center for clean energy research and development and ranks highly among U.S. states:
  - According to the American Wind Energy Association, Illinois ranked third in the nation for the installation of new wind energy generation in 2007.
  - In 2006, nearly 600,000-megawatt hours of electricity were produced in Illinois from biomass - enough to power almost 65,000 homes per year. *(Repower America)*
  - Illinois institutions are leading by example. For instance, the Illinois Institute of Technology is turning Smart Grid research into campus practice. By implementing state-of-the-art improvements in campus energy practices, IIT is expected to reduce the campus' electricity demand by at least 1 megawatt a year, which translates into 4,000 tons of CO2 from a coal-fired power plant and save as much as \$500,000 in lost productivity and damage to equipment annually.
  - Argonne National Laboratory is home to leading research in solar energy, lithium-ion battery technology and integrated fuel technologies.

## ILLINOIS: A CENTER FOR CLEAN ENERGY

### **Bio-fuels**

- Illinois is one of the top producers of ethanol in the United States with six ethanol fuel plants operating at a total capacity of approximately 800 million gallons per year of ethanol.
- Illinois has more than 140 biodiesel stations. To encourage use of biofuels, the Illinois Alternate Fuels Rebate Program offers rebates to anyone using E-85 or biodiesel fuels, and for acquiring vehicles that run on alternate fuels. (Illinois Green Fleets)

### **Wind**

- In 2008, Illinois ranked 8th in existing wind capacity at 744-megawatts, and has 5,500-megawatts of planned wind power in development. (American Wind Energy Association)
- Illinois ranks 7<sup>th</sup> in the nation of number of community wind projects. For example, Illinois Rural Electric Cooperative, the first co-op in Illinois to utilize wind power, serves more than 10,000 consumers throughout 10 western-central Illinois counties. (Illinois Institute for Rural Affairs, Illinois Rural Electric Cooperative)

### **Coal**

- Illinois has robust coal resources ranking third for the most recoverable coal reserves in the country. (U.S. Department of Energy)
- Because of our ample coal supply and geological characteristics, Mattoon, Illinois was chosen in 2007 by the FutureGen Alliance as the site for a landmark clean coal energy plant. FutureGen is a public-private partnership among the U.S. Department of Energy and 14 of the world's largest coal producers to design, build, and operate the world's first coal-fueled, near-zero emissions power plant.