



Advancing Wind Power in Illinois Conference 2011

Shawn Kestler

Acciona Energy

**How Electricity Markets Work in Illinois
Breakout Seminar**

Thursday, July 21, 2011, 1:30 PM

How Energy Markets Work in Illinois

Presented by Shawn Kestler, Vice President of Power Marketing, Acciona Energy North America

July 21, 2011

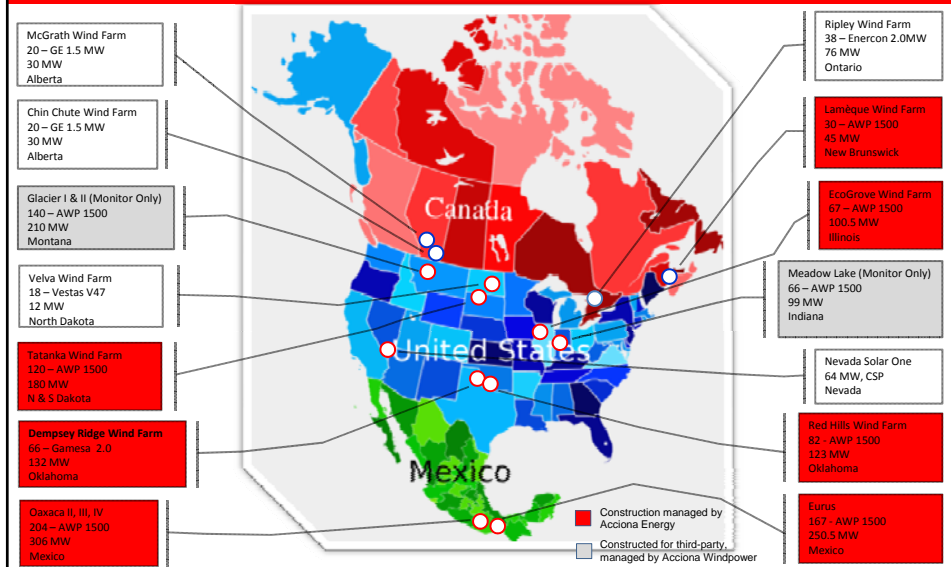


Who is Acciona Energy

- A global renewable energy company active in all the principal clean energies
- Ranked as a top three wind farm developer and constructor in the world and seventh in the world as a manufacturer of wind turbines using Acciona technology.
- Active throughout the value chain, undertaking major efforts in researching new sources of renewable energy, including solar PV, solar CSP, biomass, storage, and small-scale hydroelectric.
- 7,852 MW of installed capacity at 278 wind farms worldwide.
- Acciona Energy North America, based in Chicago, IL, has ownership in 9 operating wind farms, totaling 1,252 MW.
- In 2007, Acciona Windpower opened its wind turbine assembly plant in West Branch, Iowa, with a maximum capacity of 685 MW of turbines per year.



ACCIONA Energy North American Presence



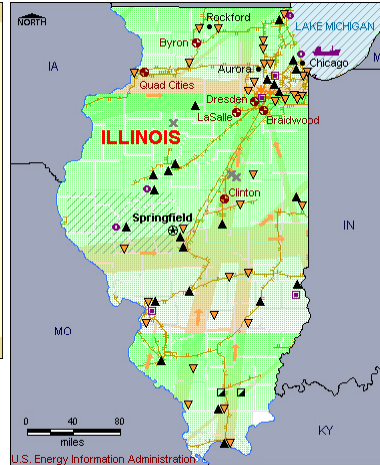
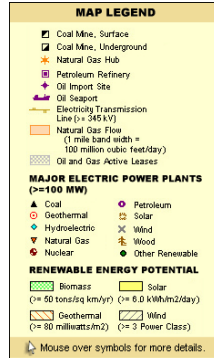
Overview

- Energy Supply
- Energy Demand
- Energy Markets
- The Illinois Power Agency
- The Renewable Portfolio Standard
- Factors Affecting the Market
- Take-Aways



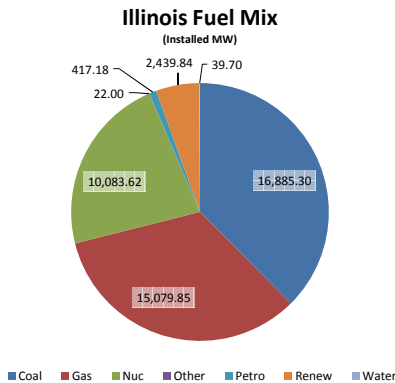
Quick Facts About Energy in Illinois

- A central location and well-developed infrastructure make Illinois a key transportation hub for crude oil and natural gas moving throughout North America.
- Illinois typically accounts for roughly one-tenth of total nuclear-powered electricity generation in the United States.
- Illinois leads the Midwest in refining capacity.
- Illinois is one of the top producers of ethanol in the Nation.



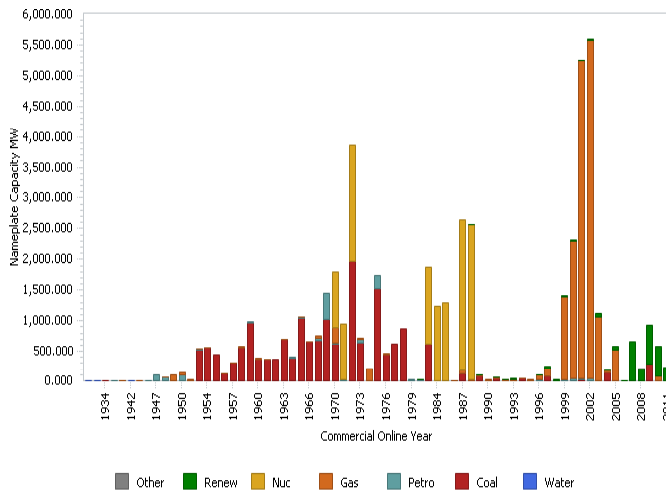
Energy Supply - Installed Capacity

Illinois has a diverse and well-balanced generation fleet.



Source: EIA 860, NERC ES&D, CFE, U.S. Federal and State Agencies, ISOs, Unit Owner and/or Operator Websites, Ventyx Primary Research

Energy Supply - Generation Fleet Vintage



Source: EIA 860, NERC ES&D, CFE, U.S. Federal and State Agencies, ISOs, Unit Owner and/or Operator Websites, Ventyx Primary Research

COAL

- The oldest operating coal plant in IL is the 334 MW Joppa Steam plant. It has a COD of 1953.
- The newest facility is the 208 MW Dallman plant that began operations in 2009.

Energy Supply - Wind Energy

- Illinois ranks sixth nationally for installed wind capacity
- 2,286MW online
- 501 MW under construction
- 16,284 MW in the transmission queue
- Illinois wind farms can power ~ 550,000 IL homes
- 249,882 MW of wind potential, ranking 14th nationally



Energy Demand – Utility Load & How its Served

- Illinois is a competitive retail energy market
- There are 37 certified retail electric suppliers in Illinois.
- ~50 different product offerings for small C&I customers

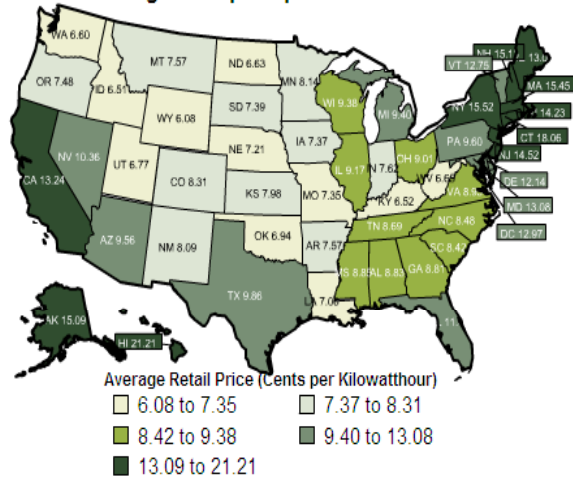
RES Usage	Total Residential	Total Non-Residential	Total
Total Number of Customers	4,488,519	522,357	5,010,876
Percentage of Customers Receiving RES Service	0.14%	19.64%	2.17%
Total Monthly Customer Usage (kWh)	2,665,245,291	6,681,461,433	9,346,706,724
Percentage of Usage Taking RES Supply Service	0.29%	78.97%	56.53%



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Energy Demand – Retail Rates

U. S. average retail price per kilowatthour is 9.83 cents



IL ranks 22nd overall

Surprise! Competition Works!

Note: Data is displayed as 5 groups of 10 States and the District of Columbia. Source: U. S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report."



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Energy Markets – Pool Markets

Illinois is only a small portion of two much broader energy markets



Energy Markets – Participants

Buyers:

- Utilities (ComEd, Ameren, Munis, COOPs) to serve “regulated” retail load
- Retail Energy Suppliers (Blue Star, Constellation) to serve “deregulated” retail load
- Power Marketers / Financial Players (DTE, JP Morgan, PPL)

Sellers:

- Utility Generators (Exelon, Ameren)
- Merchant Generators (Midwest Gen)
- Renewable Merchant Generators (Acciona, Invenergy)
- Power Marketers / Financial Players (DTE, JP Morgan, PPL)

Bilateral Transactions

- Products: energy, capacity, RECs, physical delivery, financial settlement
- Shapes: fixed, as-generated, 5x8, 7x16, options,
- Term: 1 day - 20 years
- Quantity: 1MW – 1,000MW
- Value: \$1,000 - \$500,000,000
- Example: RES buys two-year energy supply from merchant generator to serve retail load

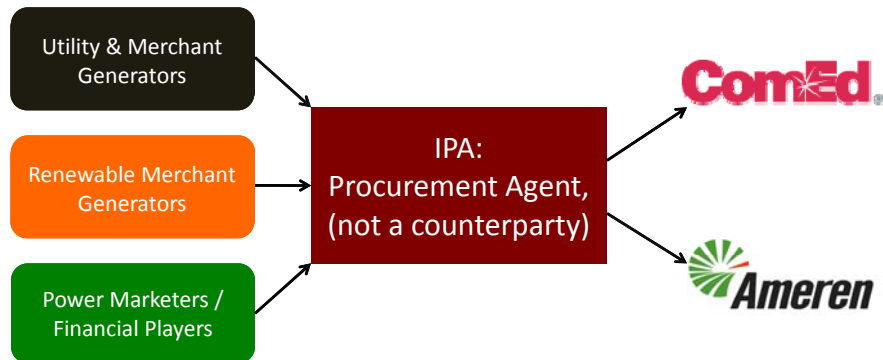
RTO Market Transactions (MISO & PJM)

- Real-Time & Day-Ahead Locational marginal price (LMP) market
- Products: energy, capacity, physical delivery, financial settlement
- Shapes: fixed, as-generated, 5x8, 7x16
- Term: 1 hour – 1 year
- Quantity: 1MW – 1,000MW
- Example: Generators offer energy for sale into DA market,
- Example: Load bid for energy for purchase from DA market

Illinois Power Agency Annual Procurements – see next slide

- State agency established in 2007 (smallest state agency in history???)
- Develops annual procurement plan for the Illinois Commerce Commission
- Conducts competitive procurements according to the approved procurement plan
- Procures all power for investor-owned utilities (ComEd & Ameren)
 - Energy, capacity, RECs, bundled renewable energy
 - 1 year – 20 years
- Procurement events held annually (Spring)
- Procurement results require approval by the Illinois Commerce Commission

Centralized Power Procurement



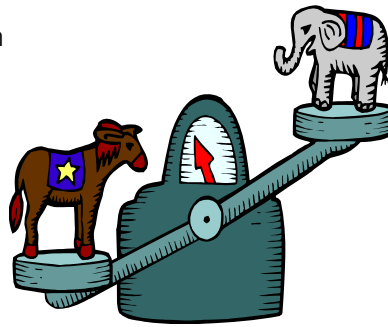
The Renewable Portfolio Standard (RPS)

- A minimum percentage of each utility's & RES's supply must come from renewable energy
 - 5% by June, 2010, increasing to 10% by June, 2015, increasing to 25% by 2025
- If feasible, at least 75% of renewables must be supplied by wind generation
- Preference for in-state & adjoining-state projects....kind of
- There is an annual budget (currently ~ \$80MM/yr)

Factors Affecting the Market Going Forward

Politics!

- Illinois Power Act reform
- Long term renewable energy procurement plan
- Tenaska clean coal project (coal gasification)
- Many others



Take-Aways

The Illinois Energy Market in summary:

- Extensive & diverse energy supply
- Substantial & energy-savvy retail customer base
- Unique and competitive wholesale and retail energy markets
- Robust renewable energy market
- Dynamic political environment



Shawn Kestler
Vice President, Power Marketing
Acciona Energy North America
333 W. Wacker Drive, Suite 1500
Chicago, IL 60606
Phone: 312-673-3005
Email: skestler@acciona-na.com
Web: <http://www.acciona-na.com/>

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