

Clean Tech and Clean Energy in the Midwest Region AWEX Chicago – août 2021

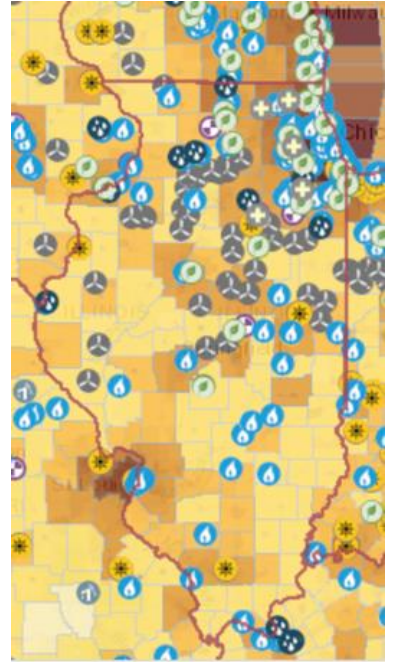
The state of Illinois is the fifth-largest energy-consuming state in the nation, and its industrial sector, which includes petroleum refining, coal mining, and agriculture, uses the most energy of any end-use sector in the state.

Illinois ranks fourth in the nation in crude oil refining capacity behind Texas, Louisiana, and California, with a refining capacity of nearly 1 million barrels per calendar day.

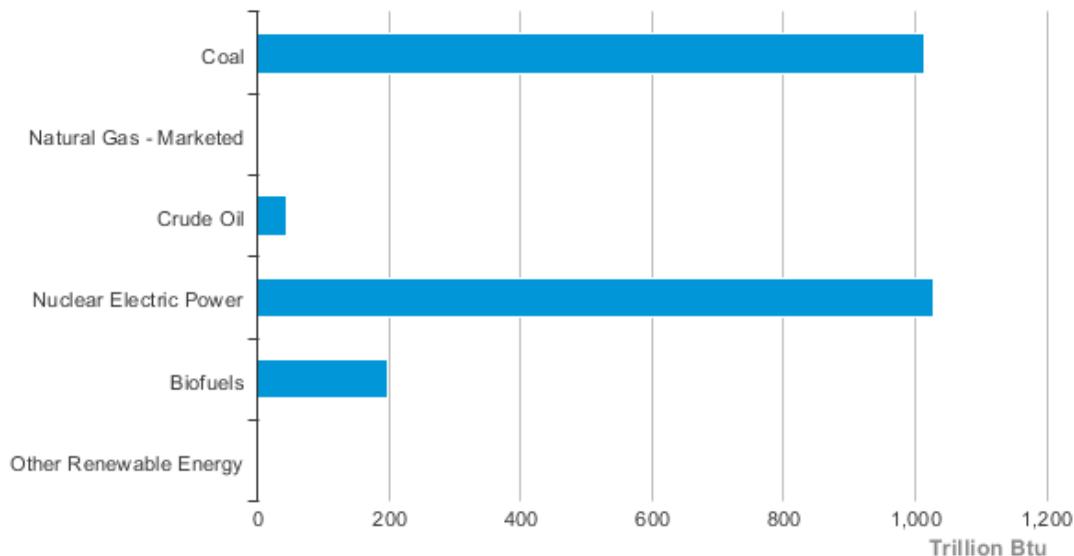
The estimated recoverable coal reserves in Illinois are the second-largest in the nation after Montana, and the state's coal mines account for 7% of U.S. coal production. Historically, the southern part of Illinois has been a traditional part of the U.S.'s coal country.

Illinois has the third-largest annual ethanol production capacity (1.8 billion gallons) and the fourth-largest annual biodiesel fuel production capacity (168 million gallons) in the nation. This is naturally attributable to the state's massive corn production.

Illinois generates more electricity from nuclear energy than any other state and accounted for 13% of U.S. nuclear power generation in 2020¹.



Illinois Energy Production Estimates, 2019



 Source: Energy Information Administration, State Energy Data System

¹ <https://www.eia.gov/state/?sid=IL>

The US Department of Energy provides detailed maps and charts on energy production in the US, state by state.

Renewable energy advocates in the Midwest are pushing renewable investment as an opportunity - rather than an impediment – that promises to revitalize sluggish state economies and create jobs in a new clean energy economy².

Illinois's nuclear energy infrastructure is formidable, hosting 6 operational nuclear power plants:

- Braidwood
- Byron
- Clinton
- Dresden
- LaSalle
- Quad Cities

There are 15 nuclear reactors in all the Midwest, as the region is defined by the US census³.

As of May 2021, the Illinois legislature is expected to pass the Consumers and Climate First Act, a sweeping bill aimed at imposing new standards of ethics and accountability with power companies, consumer protection, renewable energy and labor standards, clean power and air, transportation electrification, just transit and workforce development, equity in the clean energy economy, and energy efficiency⁴.

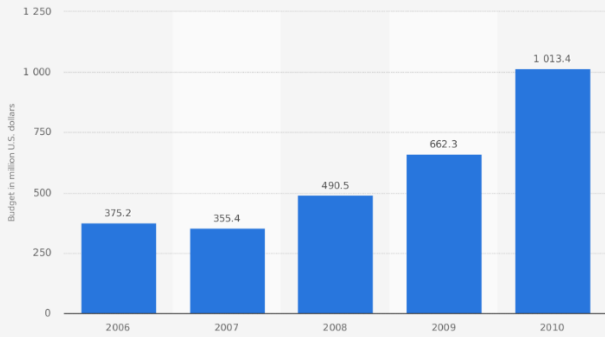
According to Statista, the state of Illinois ranks 12th in the number of incentives and policies promoting renewables and energy efficiency, as of January 2021. The Consumers and Climate First Act would likely push Illinois up on this list. In second place on this list is the Midwestern state of Minnesota, with 134 incentives and policies. The rest of the Midwestern states lag somewhere behind Illinois.

² <https://www.nrdc.org/experts/samantha-williams/midwest-renewables-surge-forward-where-ohio>

³ <https://www.nrc.gov/reactors/operating/map-power-reactors.html>

⁴ Illinois General Assembly, SB2896

Electric and gas program budgets in Midwestern U.S. from 2006 to 2010 (in million U.S. dollars)*

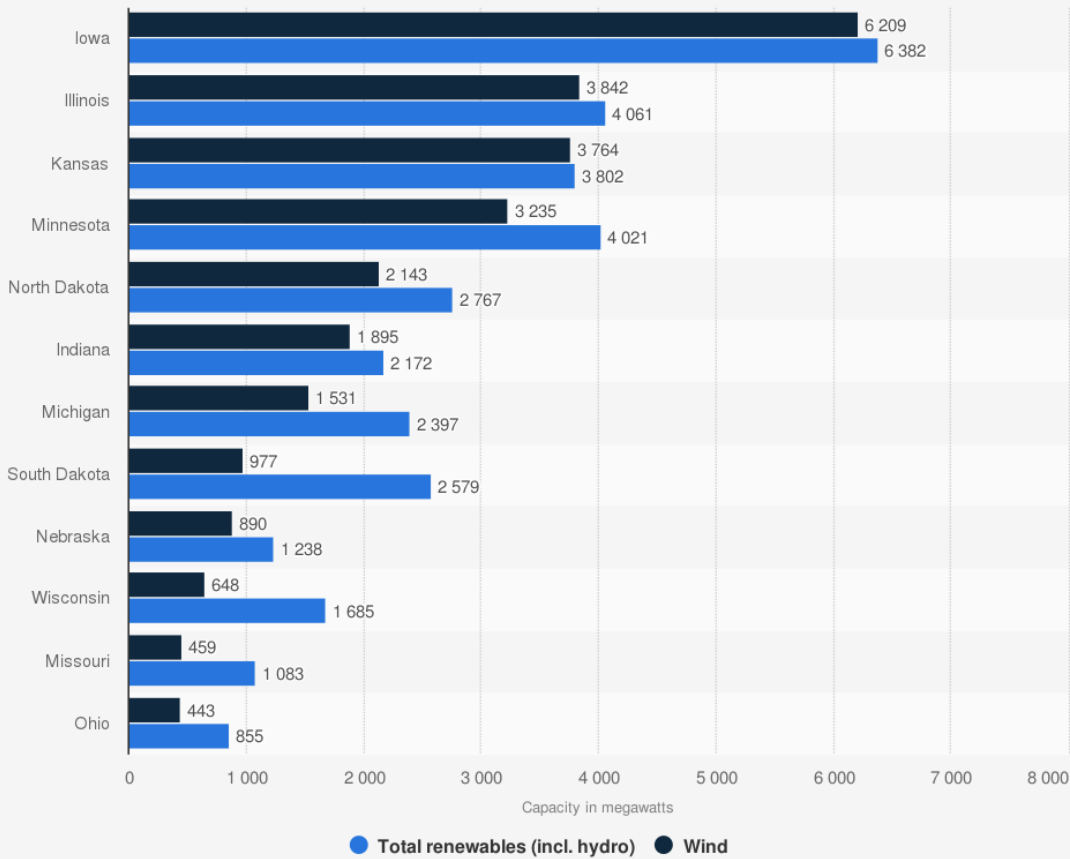


Graph of gains in electric and gas program budget in Midwestern states.

Sources
American Gas Association; Consortium for Energy Efficiency; Institute for Electric Efficiency
Additional Information:
United States; American Gas Association; Consortium for Energy Efficiency; Institute for Electric Efficiency
© Statista 2018



Wind and total renewable electricity installed nameplate capacity in Midwestern U.S. in 2015 (in megawatts)



Sources
Various sources (EIA, LBNL, SEIA/GTM, U.S. Census Bureau); US Department of Energy
© Statista 2021

Additional Information:
United States; Various sources (EIA, LBNL, SEIA/GTM, U.S. Census Bureau); 2015



Wind as a share of renewable energy in a series of Midwestern states.

Minnesota is building upon years of progress in harnessing wind power⁵ by reaching nearly 18 % of the state's generation mix in 2018. More recently, the state has been focused on solar generation. In 2017, solar energy in the state increased by more than 80 percent – a growth largely attributable to a new solar garden program that allows consumers to purchase solar power without installing arrays on their own rooftops.

As of 2015, Illinois ranked second in the implementation of wind energy, with Iowa coming in first place. Iowa⁶ produces a higher share of its energy from wind than any other state and comes in second in total wind power generation. The state, made up pretty much entirely of flat plains, is a perfect environment for the employment of wind energy. A drive through the flat prairie of Iowa and one immediately notices the prevalence of wind turbines on the landscape.

Indeed, the Midwest as a whole is expanding its renewable energy portfolio. The state of Wisconsin has seen a 12.8 percent uptick in installed wind and solar generation between 2017 and 2018. The state's governor Tony Evers proposed a budget that aimed to decarbonize the state's electricity supply by 2050.

The author of the Natural Resources Defense Council report cited in this essay opines that Ohio is falling behind other Midwestern states in the implementation of renewable energy.

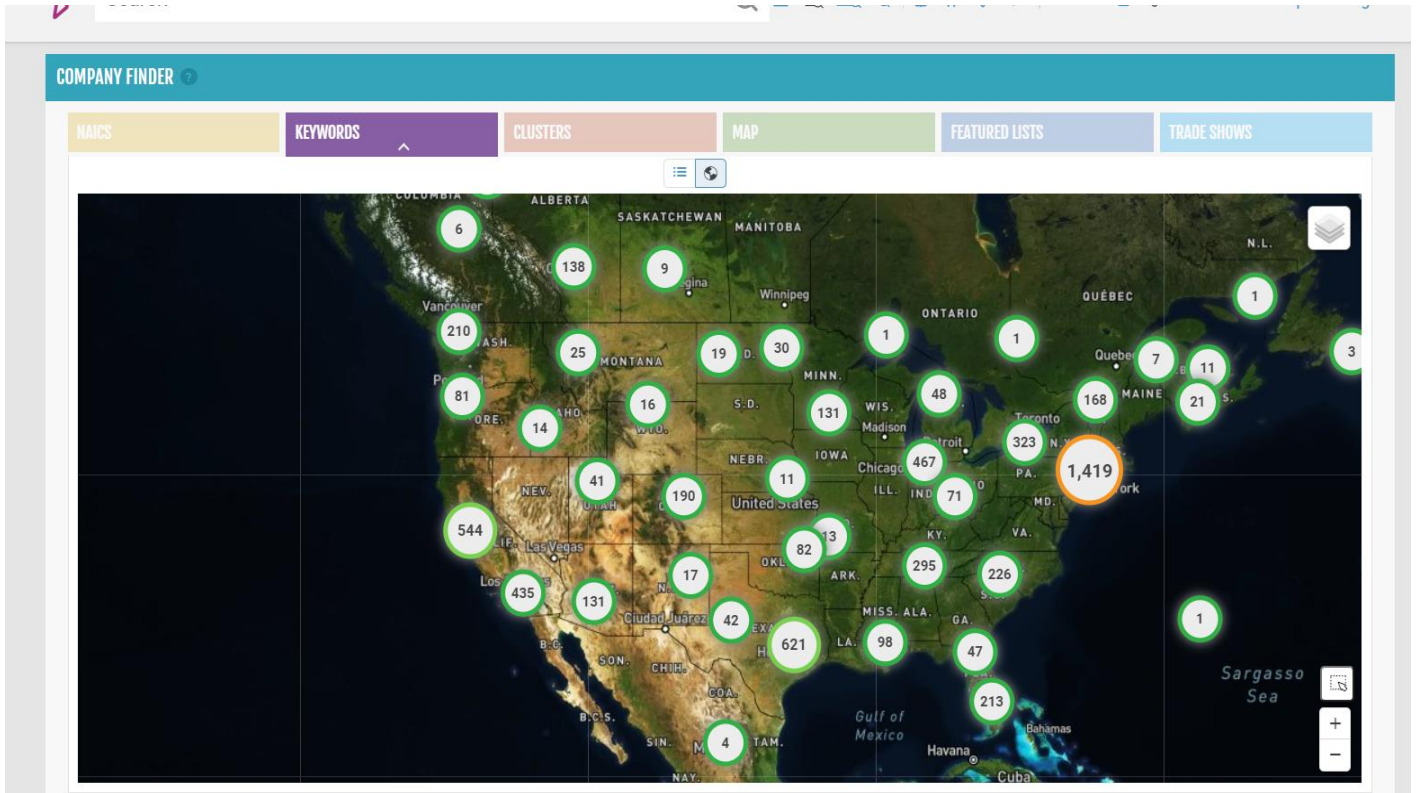
Conferences and Events

- Solar Power Midwest – Palmer House at Hilton Hotel (Chicago) Friday, Nov 5 – Sat, Nov 6.

⁵ <https://www.nrdc.org/experts/samantha-williams/midwest-renewables-surge-forward-where-ohio>

⁶ <https://www.iaenvironment.org/our-work/clean-energy/wind-energy>

- Midwest Energy Solutions Conference (Chicago) February 1-3, 2022.



A map of the continental United States, showing the location and frequency of renewable energy companies. (Gazelle.AI)