Missouri Economy Indicators
Energy Investment Trends

VOL. 6, ISSUE 7, 12 MAY 2025

According to Data Center Map, a market research firm focused on data centers, Missouri is home to 46 data centers across four metropolitan areas. These facilities support cloud services and high-density AI workloads, computing tasks that require significant processing power. Missouri has rapidly emerged as a hub for data center development due to its central location, favorable economic conditions, and supportive infrastructure. Recent announcements include Google's $1 billion investment in a Clay County facility that will require 400 megawatts (MW) of energy, and Edged Kansas City—an energy and water-efficient site that opened in late 2024—which requires 26 MW.

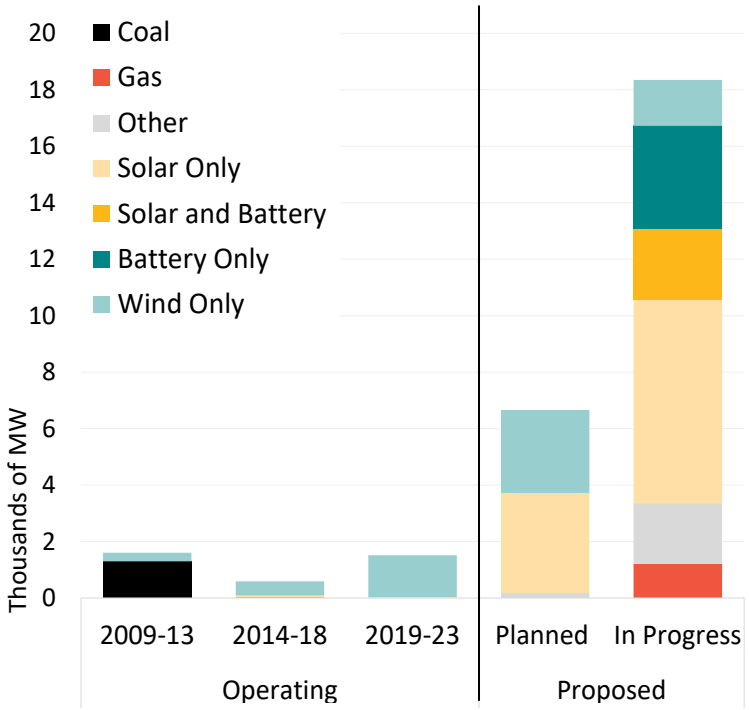
The growing number of data centers nationwide is driving up energy demand, prompting utilities to expand capacity and invest in renewable energy. In Missouri, utilities are expanding electricity infrastructure to meet increased energy demand, driven by data center growth and extreme weather events. For example, Ameren, Evergy, and Associated Electric Cooperative, Inc. have each announced major investments in natural gas facilities, with individual project costs ranging from $520 million to $900 million.

New Energy Investments Add Renewable & Battery Sources

Proposed large-scale electricity generation projects seeking to connect to the power grid fall into two categories: 1) projects with an interconnection agreement that are not yet operating (planned), or 2) projects currently being studied or slated for study (in progress).

In Missouri, most projects being studied would use solar or wind energy. Renewable energy projects represent 97% of planned capacity with an interconnection agreement, totaling 6,661 MW, and 64% of proposed capacity being studied (14,694 MW). More than 3,500 MW of battery storage has been proposed, which is fuel-neutral and helps balance the grid to ensure wholesale prices stay reasonable by "buying low" and "selling high".

Missouri's Recent Electricity Capacity and Proposed Additions by Energy Source



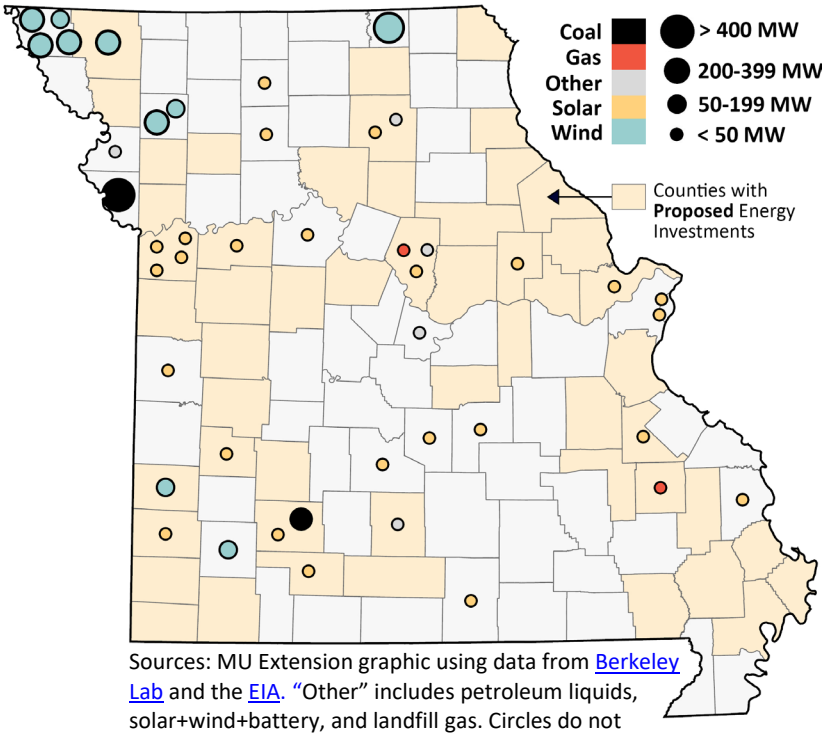
Sources: MU Extension graphic using data from Lawrence Berkeley Lab and the Energy Information Administration. "Other" includes petroleum liquids, solar+wind+battery, and landfill gas.

Shifting Currents in Energy Investment: From Wind to Solar and Battery Projects

From 2009 to 2023, utilities added more than 3,700 MW in electricity generation capacity in Missouri through 51 completed projects, affecting more than one in four counties.

Large wind energy investments (200+ MW) were concentrated in northern Missouri, where wind speeds are generally higher than in other parts of the state. Additional coal generation capacity was added just north of Kansas City and in Springfield to meet energy demand in these urban areas. Smaller-sized solar investments (typically 5 MW or less) were built in 21 counties, with many following the I-70 and I-44 corridors where high-voltage 345kV transmission lines run.

Electricity Capacity Additions by Energy Source and Megawatt (MW) Range, 2009-23



Sources: MU Extension graphic using data from Berkeley Lab and the EIA. "Other" includes petroleum liquids, solar+wind+battery, and landfill gas. Circles do not represent the actual facility location within a county.

Before 2023, most investments focused on supporting large wind projects to boost electricity capacity. However, more recent proposals target alternative energy sources, especially large-scale solar. More than half of the proposed future investments involve solar projects of 150 MW or more, some of which are paired with battery installations to store power for later use. Battery installations allow utilities to better balance energy supply and demand, improving power grid stability. One in three proposed projects includes battery storage, either on its own or combined with solar or wind. While proposed energy investments are planned in nearly half of all Missouri counties (45%), many may not be built due to long development timelines and other risks. For example, of all U.S. energy projects proposed between 2000 and 2018, fewer than one in five were operational by the end of 2023.

Additional Resources and Notes

- The U.S. Energy Information Administration provides an interactive map of all energy infrastructure and resources nationwide.
- Missouri has been selected by the National Governors Association and the U.S. Department of Energy to host a two-day, in-state nuclear energy summit in 2025, in collaboration with multiple stakeholders.
- More information about leasing land for solar energy development and wind energy leases is available on the University of Missouri Extension's website.

All Missouri Economy Indicators briefs in this series are available at http://muext.us/MissouriEconomyIndicators
Sign up for the Exceed newsletter at http://muext.us/MUExceedNewsletter

Authors: Adrienne Ohler, Associate Extension Professor, adrienne.ohler@missouri.edu
Alan Spell, Assistant Extension Professor, alan.spell@missouri.edu

Exceed Regional Economic & Entrepreneurial Development

MU Extension University of Missouri