Energy



Steps for lawmakers to allow a nuclear renaissance

By Patrick McIlheran

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Wisconsin should continue to unwind old error of ruling out abundant power

Wisconsin erred in forsaking nuclear energy years ago, and it is now a decade into the slow process of reversing that mistake. Even as demand for electricity appears set to soar in coming years, utility and private-sector players are envisioning new versions of nuclear power.

Key findings

- Wisconsin electricity generation is turning upward after a long relatively flat period.
- Natural gas is the dominant and growing fuel for generating electricity; coal is second most important but is fading. Wisconsin's one nuclear power plant generates about 15 percent of our electricity and is the most reliable source. Utility solar installations generate 4 percent, a growing figure, while wind generates less and is flat.
- Demand is likely to rise, especially due to data center development. Two large data centers near Milwaukee are expected to increase demand by about a quarter of the capacity of every power plant now running in Wisconsin. "Green energy" goals of ending fossil fuel use in homes and cars would increase power demand by shifting energy needs to electricity.
- At least one utility is looking at installing "small modular reactors," which may provide cheaper and faster generating capacity than conventional nuclear plants.
- At least one utility is exploring the possibility of nuclear fusion, a technology in which UW-Madison is a leading research center.

Recommendations

- Complete the ongoing Public Service Commission study on removing regulatory barriers to nuclear development.
- Set statutory time limits on steps in the regulatory process.
- Avoid using the tax system and the regulated rate-setting system to subsidize energy development or to favor one form of energy over another.
- Remove from statute and executive rulemaking any goal of prohibiting particular forms of energy, including natural gas for home heating and appliances or gasoline for transportation.

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Introduction

Since the early 1980s, Wisconsin has made a major policy mistake by discouraging the development of an extraordinarily reliable source of abundant electricity — nuclear power plants. Over the last decade, however, there have been encouraging signs that Wisconsin is finally beginning to reverse course.

In 2016, Wisconsin lifted a moratorium on the construction of new nuclear power plants that had been in place since 1983, when it was adopted amid a wave of anti-nuclear sentiment. Since then, lawmakers have passed additional legislation to welcome an industry that is reemerging after decades of limited development. These positive developments in Wisconsin are part of a broader renaissance of nuclear power nationwide.

Meanwhile, some utility and private-sector players in Wisconsin are envisioning new ways of using nuclear physics to generate power even as multiple factors seem poised to make demand for electricity soar in Wisconsin.

This chapter reviews Wisconsin's current electricity mix and the factors likely to drive increased demand in the years ahead. It then examines recent developments that could expand nuclear power generation in Wisconsin and recommends steps policymakers can take to remove unnecessary regulatory barriers while avoiding subsidies and other forms of government favoritism.

As things stand

Wisconsin's electricity use is about a third higher than it was in 1990, but much of that growth was before 1999 until a turn upward in 2024, according to the most recent federal figures. Overall power generation increased between 2023 and 2024 by about 5.1 percent to 64,500 gigawatt-hours.[1]

Accounting for population, Wisconsin's per-capita electricity consumption peaked in 2007 at 12,708 kilowatt-hours per person per year, and was about 10 percent lower, 11,464 KWh a year, in 2024.[2] About 40 percent of the electricity generated in Wisconsin comes from burning natural gas, a share that's increased quickly since 2012. Coal, formerly the dominant fuel, supplied about 32 percent of the state's electricity in 2024, and its share is falling as utilities close coal-fired plants.

Wisconsin now has one operating nuclear power plant, Point Beach, north of Two Rivers, and it supplies about 15 percent of the total. Utility-scale solar panels generated about 4 percent, a rising share, while wind generation and power from

the state's 66 hydroelectric dams both remained steady at about 3 percent each. Wisconsin imports about 14 to 18 percent of the electricity it uses, drawing it from other states and Manitoba via a regional "grid" operator, MISO.

The sources of electricity vary by how much power they produce relative to their stated capacity. Nuclear is the most reliable, with Point Beach producing about 96 of its rated output. Wind turbines average about one-fourth of their rated capacity, while solar averages a little under 20 percent. Both are by nature intermittent, subject to weather. Both, especially solar, use a lot of land relative to their power output and face problems regarding wildlife habitat.[3]

Ahead

Demand is likely to rise.

The world's largest data center, just built by Microsoft in Mount Pleasant, and another "hyperscale" data center being built north of Port Washington, are together anticipated to use about 3.9 gigawatts of electricity, more than 3 times the output of the Point Beach Nuclear Plant and about 25 percent of the entire capacity of every power plant in Wisconsin.[4]

Until a change in policy under the Trump administration, the federal government was pushing for the replacement of gas-powered cars with electric ones, and state policy played along. Charging such vehicles could increase electricity demand significantly.

The outgoing Evers administration's 2022 "clean energy" plan envisioned replacing natural gas as Wisconsin's primary home heating fuel, turning instead to electric heat pumps. Since conventional electric heat pumps don't work well in the low temperatures Wisconsin commonly sees in winter, an estimate of the cost of a heat pump mandate in Wisconsin commissioned by the Badger Institute[5] found that forcing such a shift would cost about $20,000 per new house over the 15-year life of a heat pump, mostly because of the cost of added electricity used.

In Wisconsin, as elsewhere, the speed with which demand is anticipated to rise, especially due to data center construction, is prompting a re-evaluation of electricity generation. Data center developers in Wisconsin have said they would seek to draw much of their power from "renewable" sources, though power utilities are also commissioning new natural gas-burning plants, which can be built quickly.

Another option that is probably not in the cards: a return to large coal-burning plants, due to federal regulatory hostility dating to the Obama administration, despite such plants' low production costs[6] even after the installation of costly advanced pollution control equipment.

Given the huge demand for new electricity and the obstacles to new large coal plants, nuclear power plants are receiving increased attention as a major source of power. Their reliability, emissions-free nature and ability to produce power at necessary scale[7] have led to a revival of interest across the political spectrum.

The Biden administration promoted the study of existing and recently retired nuclear power plant sites as places for installing new reactors with a shorter regulatory timeline — a key to reducing the cost of new nuclear capacity.[8] One potential site is the retired but still-intact plant near Kewaunee, the owner of which announced in 2025 it was seeking a license that could let it reopen the plant.[9] Such a revival would echo the in-progress restart of a retired nuclear power plant in Michigan, across Lake Michigan from Kenosha.[10]

An organization that supplies electricity to rural co-ops, La Crosse-based Dairyland Power Cooperative, in 2022, meanwhile, began exploring[11] the possibility of buying "small modular reactors" — smaller factory-made units that potentially could reduce both costs and permitting timelines relative to site-built full-size reactors.[12] The co-op envisioned such capacity as a complement to wind and solar, able to supply power when the wind died and sun set. Dairyland reiterated its interest in October 2026, announcing a deal with a developer of SMRs and naming a potential location, the Genoa site that once hosted a small experimental reactor.[13]

Looking further ahead, a Madison-based startup trying to develop a commercially viable nuclear fusion reactor struck a deal in September 2026 with investor-owned Madison Gas and Electric to explore such a power plant by the mid-2030s.[14] The University of Wisconsin-Madison is a center of research into fusion,[15] which may offer significant advantages over fission, used in all nuclear power plants to date.

Policy recommendations

Rising electricity demand and renewed interest in nuclear power have created an opportunity for Wisconsin to expand its use of this energy source. The state took an important first step by repealing its moratorium on new nuclear power plants in 2016. What additional steps should policymakers take?

Remove unnecessary regulatory barriers. Because of Wisconsin's system of regulated rate-setting — well beyond the scope of this discussion — and the long timelines and high capital needs of nuclear development, any disincentives to market-based responses to electricity demand may not be clear to policymakers. A prudent course would be to listen well to private-sector actors while exercising caution to avoid loading financial risk onto taxpayers or ratepayers.

One good step was the legislation[16] now enacted in 2025 to order the Public Service Commission to lay regulatory groundwork for new nuclear development.[17] The study, now underway,[18] and measures to add time limits to the regulatory process, should "accelerate the decision-making times," said its sponsor.

Less clear-cut was a 2025 bill[19] — that ultimately didn't pass — using a tax credit and definitions of what costs were recoverable from ratepayers to lower the risk utilities face in the years-long approval and construction process. The bill was driven by uncertainties and delays imposed by the regulatory process. A better approach would be statutory time limits on regulators' permitting process,

providing energy project developers with reduced uncertainty.

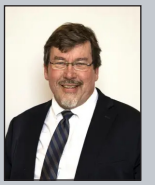
One helpful factor: Data center developers have shown a willingness to pay higher rates sufficient to cover the entire cost of generating capacity their power use necessitates. A bill to codify such a requirement[20] failed to advance,[21] but regulators are working such requirements into rate-setting cases.[22]

End favoritism. The 2025 bill offering nuclear incentives also would have given nuclear plants a parity with regulatorily favored solar and wind projects in state prioritization. A better path would be for the state to end such favoritism entirely.

More broadly, the state's attempts to dictate or to "nudge" its citizens out of using forms of energy they find affordable and available should cease. Gov. Tony Evers never backed off his goal of eliminating the use of natural gas — even in household appliances and heating — by 2050, despite the grave costs such a mandate would impose.[23] Similarly, a plan to encourage electric vehicles via state-subsidized charging stations proved a costly bust.[24] The state should end any goal or timetable for abandoning any form of energy, including specifically natural gas and gasoline, removing mentions from statute and repealing executive orders toward that end.

The next governor and Legislature should carefully observe the distinction between allowing development of an ample energy supply and attempting to dictate the means.

About the author



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