

# Reliability AND MEETING Increased Demand

By Jeff Mayers and WisBusiness.com

## AN OVERVIEW OF WHAT'S DRIVING THE CONVERSATIONS

You may not think of Wisconsin utilities as big economic development players.

But when you look at them in terms of the state's data center boom, the relationship between power, AI and jobs comes into focus.

Competitive Wisconsin, Inc. recently assembled top utility executives to discuss the challenges facing today's power industry. The topic of data centers was front and center — even before Microsoft was forced to pull back on one of its proposed Racine County data centers because of local opposition.

At least 47 data centers are currently up and running or proposed in Wisconsin, according to data center map information reviewed by WisBusiness.com. But experts say there could be more, because some companies obscure their plans by entering into non-disclosure agreements and creating shell companies. The state's available electricity, available land and colder climate to assist with cooling needs are attractive, experts add. Concerns have been expressed about water usage to which data center advocates argue that with new technology, data centers don't need substantial water.

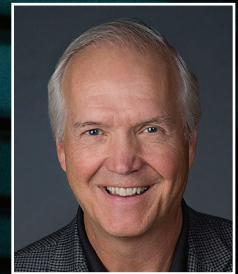
The top utility executives gathered by CWI in the fall of 2025 generally endorsed the idea of more data centers.

"We want to win the AI race; we need to have this technology under our control," says Alliant Energy President and CEO Lisa Barton.

She explains her philosophy: "Think of it as the numerator over denominator. The more we grow the denominator, the lower the overall cost will be. It's up to us to ensure that our regulators are comfortable with whether it be an individual contract or a tariff, that the cost of service for any of these new loads is appropriate and not a burden on other customers. And that's been our commitment from the beginning. We've always said it needs to be a win, win, win. It certainly needs to be a win for the new customers, a win for existing customers, and certainly a win for investors.

"We should want more data centers. We should want to be on the cutting edge of technology. And costs will go down because of that denominator growth."

"Let's keep in mind that when we're talking about data centers, we're not talking about Silicon Valley wanting to come here and plop things down for their benefit. They're coming here because we're users of that data



JEFF MAYERS

A woman with dark hair, wearing a teal t-shirt and a necklace, is standing in a server room. She is holding a tablet in her left hand and pointing with her right index finger at a small screen embedded in a server rack. The server racks are black with perforated metal doors, and some internal components and cables are visible. The lighting is dramatic, with strong highlights and deep shadows.

Wisconsin's energy  
conversations are getting  
more complex and ever  
more important.



center. We're the ones that are streaming video. We're the ones that are engaging in the technology that requires this. It's the data center's computing power that allows us to have the digitally integrated lives we all live," says Madison Gas and Electric Chair, President and CEO Jeff Keebler. "I personally would rather have them in our backyard where we can control and help plant the seed of how they operate than just leave it up to someone else. So, I absolutely agree that we would rather have them here than somewhere else."

Karl Hoesly, Xcel Energy's president for Wisconsin and Michigan, notes that jobs are generated beyond the initial construction jobs. "What we've learned is, after they're built, they're almost constantly under some form of construction as they pull in new racks, replace their servers or CPUs ... but the jobs are more than maybe the 100 jobs that come with a one-gigawatt data center. There's a bunch of ancillary jobs that come with it."

Barton ties the streamlining effort to the "Right of First Refusal (ROFR)" bill that stalled in the Wisconsin

Legislature. ROFR could hold back data-center-driven economic development, she says.

The legislation would give incumbent utilities the first shot at building new transmission lines. It was the most lobbied bill during the first six months of the year, according to numbers compiled for WisPolitics.com.

"I have a choice. I can put a data center in Wisconsin, or I can put a data center in Texas. Texas has a right of first refusal," Barton says. "They know exactly when that transmission line is going to be built. They've got certainty."

"You have in almost a large majority of the states, even in MISO, they have that right of first refusal. And the folks who are often arguing against it look in their backyard, and they've got that right of first refusal. And those are all states that have been very successful on economic development. If you look particularly at the Southeast, and the Southeast is aggressive, and to be honest, I think that they've got an advantage on us. They've been doing this and focusing on economic development and on-shoring for decades. So, we've got



some catch-up to do, and what we want to do is just make sure that it's an honest fight — that when we come to the table, we have nothing that's going to slow us down.”

### ■ Infrastructure and Capacity Considerations

Brent Ridge, president and CEO of Dairyland Power, a cooperative in western Wisconsin, calls for a balanced energy portfolio to handle the coming data center load.

“To get ahead of the data centers, we have to get ahead of the generation, the available generation, and we have to get ahead of the transmission, and we have to build our system for let's call them the worst days,” Ridge says. “We have to build them for the hottest, humid days. We have to build them for the coldest days, the coldest and windiest days. If those days are consuming 90% of our available energy and capacity, we can't put on another 20,000 megawatts of data center.”

Ridge raises current capacity concerns related to the need to build transmission and generation, saying: “I think the queues are full right now. That could change, but right

now, the volume of build-out required for data centers is going to challenge the infrastructure here in the upper Midwest. And when you look at the two components of the equation, the need for generation and the generation coming from renewables, if the renewables are 500 miles away and you don't have transmission to get it to where you need it, that's a challenge, and that's why the transmission is so important. And frankly, it's equally as important as the generation.”

Ridge says the power industry has to use and explore all available sources, including nuclear and fossil fuels.

“The market price will determine where renewables go,” he says. “If they're a competitive energy source, they will continue to be built. I think there's obviously some challenges right now with some of the subsidies going away, but if it can compete on its own, solar and wind can compete on its own during many days throughout the year. If the price stays competitive, renewable will continue to grow on coal. I think it's fair to say we're not going to build any coal plants in the near future (with natural gas filling the gap)”

Ridge calls for a balanced approach including transmission, generation and storage. “We have to as a state. We have to embrace every form of energy. We can’t exclude any; we have to try to find a way to make all the energy sources work. We have to find a way to find the land to put the solar on and protect prime farmland. We have to find balances. We have to be able to find a way to properly utilize fossil fuel, whether it’s coal or natural gas.”

American Transmission Co. (ATC) is responsible for the grid. ATC Chair, President and CEO Teresa Mogensen, says this energy-dependent digital revolution is the successor to the industrial revolution.

“So, we are needing to expand the grid to respond to all of those things. And on the generation side, they’re needing to expand the resources to meet a higher level of load collectively than we had before,” she says. “All of those things are driving the need for increased facilities, changed facilities, updated facilities, in the critical infrastructure on the electric side that powers all of that.”

Plus, there is an urgency, she says.

“Time is of the essence. How do we get these needed facilities in place as quickly as possible? ... We absolutely support a comprehensive and efficient process for permitting and siting facilities. Where we run into some

challenges is the processes that exist now were generally put together decades ago, and they don’t necessarily match the urgency of the timing today for getting through that process, making those decisions. ... I think what we’re really looking for is an alignment and trying to streamline processes, speed the reviews, make sure that the goals are aligned.”

While data center interest in Wisconsin is high, Wisconsin ranks behind other Midwestern states. Michigan has at least 57 data centers; Minnesota, 72; Indiana, 74; Iowa, 104; and Illinois, 222, according to Data Center Map (DCM), an industry resource launched in 2007 that operates a global data center directory and sources information from data center operators, end-users, through manual sourcing and more.

Almost half of those in Wisconsin, 21, are located in the Milwaukee area, with 11 in the Madison area and five in and around Kenosha. The rest are scattered around central Wisconsin, DCM shows. Many of these data centers have operated for a decade or more.

### ■ Assessing Long-Term Effects

But many Wisconsinites have raised concerns about the environmental impact the data center boom will





have. People are also concerned about rising utility costs associated with the increased demand on the power grid.

One of the data centers proposed in Wisconsin is the \$15 billion, 672-acre Vantage data center near Port Washington. The Port Washington Common Council in August approved a development deal to move forward with the project's Denver-based company. But the Vantage project is only the first phase of a larger 1,900-acre data center campus that Vantage purchased from Cloverleaf Infrastructure.

The Washington-based developer touts “delivering clean-powered, ready-to-build projects,” but has not announced who else will occupy the campus.

Another large data center investment, at least by dollar amount, comes from Microsoft's more than \$7 billion plan to build two data centers in Racine County's Mount Pleasant.

That plan, which includes at least 1,575 acres, doesn't include the two other recent Microsoft data center plans in nearby Caledonia and Kenosha. In January, Microsoft purchased 240 acres in Kenosha. The Caledonia Plan Commission on Sept. 29 approved amending a land-use plan to rezone a 245-acre site, but less than two weeks later Microsoft announced it was backing out of its Caledonia effort, citing “community concerns.”

Microsoft also announced it still plans to find another

site in southeastern Wisconsin instead of Caledonia. Those projects, if the company's Caledonia replacement is the same size, would bring Microsoft's total footprint to more than 2,000 acres of data centers in southeastern Wisconsin.

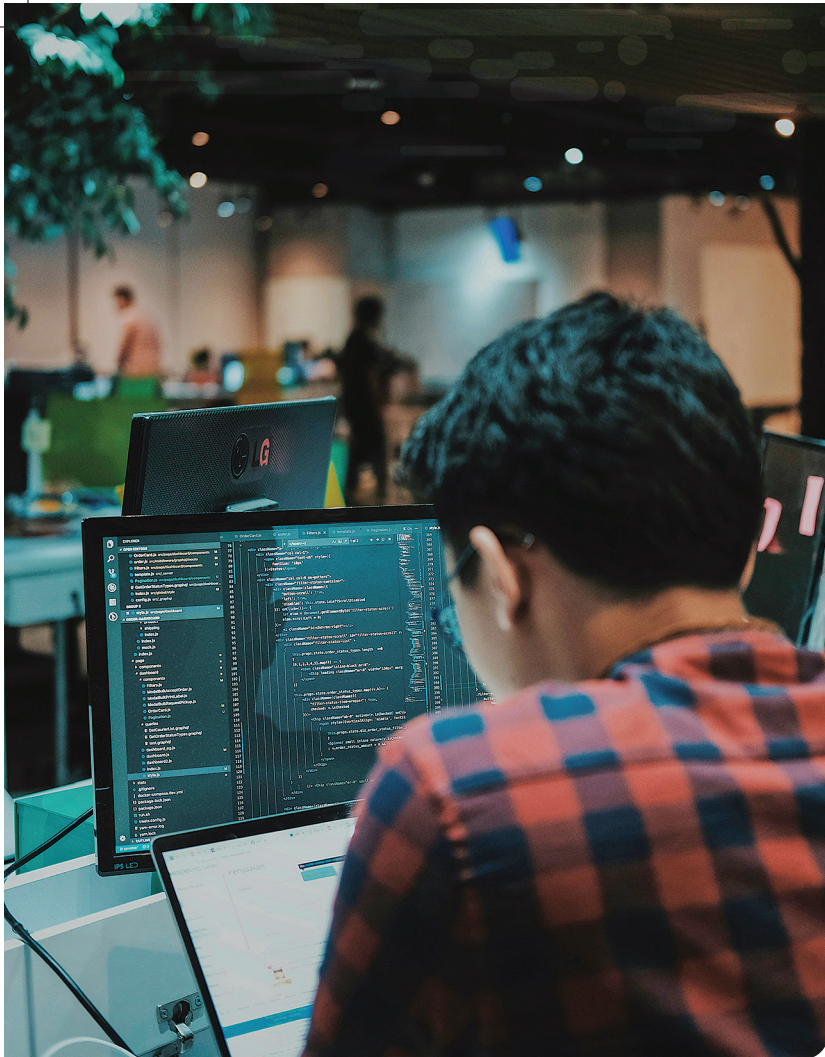
Microsoft's first Mount Pleasant project and the Vantage project combined will require roughly 3.9 gigawatts of power. That's not including Microsoft's second Mount Pleasant project.

Clean Wisconsin in an analysis of the two projects found that's enough power for roughly 4.3 million Wisconsin homes, more than the roughly 2.8 million housing units that currently exist in the state.

Amy Barrilleaux, Clean Wisconsin's communications director, also said the speed at which companies are forging ahead makes it difficult to quantify the environmental impact they will have. But it's clear there will be lasting effects, she added.

“It is going to push Wisconsin into a place where we're not any closer to our clean energy goals, our climate goals, in a summer when we've had terrible smoke and severe flooding,” she said. “And so, I think we're seeing, just in terms of the sheer demand of energy that these data centers are going to need, we're seeing how big that is.”

Water consumption is another major concern, Barrilleaux said.



Many past data center designs required continual water consumption, pumping it into cooling systems to reduce the heat of technology and then pumping it right back out of the facility again. Newer designs tend to use closed-loop designs, which are filled with water that circulates through technology and then is cooled back down through large radiators, similar to a car's radiator system. These systems dramatically reduce water use. Vantage has stated that the Port Washington data center will equal the water use of 65 homes.

But the closed-loop design is a trade-off, she said, adding "those systems are more energy intensive."

"So, it's important to understand that 70% of water withdrawals in Wisconsin are for power generation in this state," she said. "We do not have a good understanding of what the true water impact is going to be in Wisconsin, because we don't for most of these projects, know how much energy they're going to use. We don't know how many gallons of water they're going to use on site. We don't know exactly where they're going to be getting this water from."

That said, while the data confirms that 70% of water withdrawals are for power generation, the United States Geological Survey notes that the once-through cooling systems used by most power plants have "consumptive use of just 1% of total once-through withdrawals." And, according to the Wisconsin Department of Natural Resources "water loss is minimal relative to the amount withdrawn because water is used and discharged near the point of withdrawal."

Dan Diorio, vice president of the Data Center Coalition, said water usage by data centers in Virginia, the nation's data center hub, is sustainable, and the state's regulations help ensure things stay that way. He also argued the industry "is committed to responsible water use, and it prioritizes efficient water practices and responsible management across operations and development."

"Data centers are also actively investing in and deploying innovations, such as waterless cooling systems, closed-loop systems, and the use of recycled or reclaimed water," Diorio said. "The industry also engages in water and watershed conservation and restoration projects in local communities and globally."

### ■ Broader Economic Considerations

Former Wisconsin Technology Council President Tom Still noted data centers bring significant economic growth to Wisconsin, including "a clustering effect around the data centers."

"I think that the presence of such data centers can be enticing to companies that might be of the type that want to use them," he told WisBusiness. "If you have a company that's going to be somewhere in the tech world, you probably want to be closer to a data center than not."

The projects will also attract jobs related to construction and management of the facilities, as well as tech-related jobs to operate the complicated machines inside, he added.

Wisconsin AFL-CIO President Stephanie Bloomingdale said the state's union workforce "stands ready to construct these highly technical facilities for the data centers."

"And because of their training and their expertise, union workers are able to meet the needs of the projects,"

she added. “And when we have union labor involved in working on these projects, it not only is great for them and their families, but it also has an effect in their communities, of bringing in resources into the communities in which they live.”

Diorio said a PricewaterhouseCoopers analysis showed that data centers in 2023 in Wisconsin supported more than 47,000 jobs and brought in \$670 million in tax revenue to the state.

“Data centers create high-wage jobs, provide substantial economic investment, and generate crucial local and state tax revenue that helps fund schools, transportation, public safety and other community priorities,” Diorio said.

### ■ Ensuring Fair Cost Allocation

Many Wisconsinites have also voiced concerns about rising utility costs brought on by the data center boom. But Wisconsin state law prohibits public utilities from shifting costs to build power capacity brought on by data centers, and the Public Service Commission is tasked with making sure they follow the law, experts have noted.

There are two cases before the PSC board right now involving data center costs, one filed by We Energies for the projects in Mount Pleasant and Port Washington, and another filed by Alliant Energy for a project in Beaver Dam. As of this writing, the PSC cases are still pending — infrastructure has been approved but the critical data center rate/tariff cases have not been fully resolved.



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— Dan Diorio, vice president of the Data Center Coalition

Citizens Utility Board Executive Director Tom Content said those two cases will show whether the tech companies actually shoulder the cost of the burden they’re putting on the grid. Content said one of his group’s biggest goals as a consumer advocate is to ensure regular people don’t end up responsible for the costs incurred by big companies.

“There wouldn’t be a bill if it weren’t for one massive customer,” he said. “Common sense says, why should all the other customers have to foot the bill for that? So that’s what we’re trying to make sure, to see if common sense is actually applied, and customers can be protected.”

Transmission lines, the big power lines that carry electricity from a power plant, wind farm or solar farm, are another story, though, Content said.

ATC just filed for a \$1.4 billion project that’s related to the Port Washington data center project, and most ratepayers in Wisconsin would have to pay for that, Content said. The way ATC costs are paid is basically through a trickle-down to normal consumers.

But Diorio argued the data industry is “committed to paying its full cost of service for the energy it uses, including transmission costs.” ●

*Portions of this article first appeared in WisPolitics and WisBusiness subscriber products via reporting from Adam Kelnhofer.*

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