



# IT'S ALL ABOUT THE Balance

By Tom Still

**B**alance is important in many aspects of life ... the food we eat, the politics we preach, the work habits we follow and the exercise routines we do (or don't do).

Balance is also critical when it comes to how electric energy is generated and transmitted to our homes, businesses, hospitals and more.

That theme emerged in recent interviews with utility executives gathered through Competitive Wisconsin Inc., a nonpartisan group of business, labor, agriculture and education leaders focused on improving Wisconsin's economic competitiveness.

Their wide-ranging conversations covered the need to balance generation sources — from coal to wind, from natural gas to solar, and from nuclear to emerging technologies that may still be decades away.

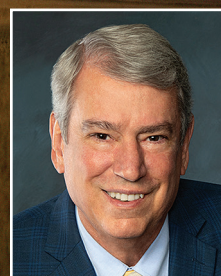
They also extended to the tricky balancing act of transmitting electric power from where it's generated to where it's needed in an increasingly energy-hungry society.

"As a state, we have to embrace every form of energy," said Brent Ridge, president and chief executive officer of

Dairyland Power Cooperative, which is based in La Crosse, Wis., and operates in parts of four states. "We have to find balance."

Major forms of electric energy generation come with pros and cons. Here's a basic rundown:

- Efforts to reduce energy dependence on coal are underway across the country, but it's still a major generation source in Wisconsin and more so nationally. In 2024, coal plants provided nearly 32% of Wisconsin's net electricity output, which is down from 50% in 2018 and more than 60% in 2010. It is likely to continue that slide.
- Natural gas surpassed coal as the leading source of electricity generation in Wisconsin in 2022. It supplied about 41% in 2024. Such plants emit much less carbon dioxide than coal plants, but some groups continue to oppose new construction. Additionally, construction of new plants may be difficult in the short term: There's a five-to-seven-year backlog in the construction of natural gas turbines, which are continuous flow internal



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Photo courtesy of Dairyland Power Cooperative



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combustion engines that generate electricity by burning gas to spin blades connected to a generator.

- Solar energy is rising as a percentage of Wisconsin's energy generation, with estimates ranging from about 5.5% to 7.65% depending on how utility solar and "rooftop" solar is counted. Either way, continued growth is expected because it's relatively cheap and not tied to the same kinds of worries affiliated with fossil fuels. There are some drawbacks, such as citizen opposition to major solar projects — especially those built in rural areas. Points of opposition are visual impact, loss of forest and farmland, safety tied to possible lithium battery fires and health effects on neighbors. An intangible complaint is resentment that large solar projects in rural Wisconsin are being built to meet the energy demands of urban and suburban areas.
- Wind energy is akin to solar in the sense it doesn't come attached to greenhouse gas concerns. It accounts for about 3% of the electric power generated in Wisconsin, a relatively stable figure in recent years. Also, like

solar, there can be citizen complaints about giant wind turbines in the visual "backyards" of nearby residents.

- Hydroelectric and biomass power provide about 3% and 1.5%, respectively, of Wisconsin's electric power generation.
- Surprising to some people is how much of Wisconsin's electric power is generated by conventional nuclear fission plants — about 15.5% in 2024, with the Point

Beach plant near the shore of Lake Michigan being the sole source. The U.S. Nuclear Regulatory Commission relicensed Point Beach units 1 and 2 in late September 2025, extending operations through 2050 and 2053, respectively. Had a shutdown been imminent, a major gap in Wisconsin's energy production would have occurred at the same time demands are rising.

- On the horizon: Small modular nuclear plants also generate electric power through fission — the splitting of atoms, generally from heavy metal uranium. They can be faster and less expensive





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to build while providing ample power, but questions remain about safety of new designs, waste storage and cost. A promising sign is that Democratic Gov. Tony Evers and members of the Republican-led Wisconsin Legislature agreed on two bills this summer to encourage nuclear fission and fusion in the state. One bill would require a study of nuclear energy opportunities and potential nuclear power and fusion sites in Wisconsin. The second would create a Nuclear Power Summit Board to help showcase Wisconsin's leadership in the industry.

Rising energy use in Wisconsin is in part driven by the rise of large data centers, but it's also fueled by other trends.

Overall use has grown in the industrial sector, which includes agriculture and food manufacturing. Industry accounts for about three-tenths of the state's total energy consumption and has finally passed pre-COVID levels. Electric vehicles are here to stay. More housing is being constructed. Residential use in existing homes has climbed,

led by heating and cooling units, but other systems and devices are a growing part of the picture.

"Everything in our house is getting plugged in," quipped Karl Hoesly, president of Xcel Energy, Wisconsin and Michigan.

The rise of the digital economy isn't new, added Teresa Mogensen, chair of the board of directors, president and chief executive officer at American Transmission Co. (ATC), who noted data centers have been around for years to power the internet as well as fundamental changes in how people live and how industry functions.

"This is a digital revolution that has followed on the industrial revolution of the past. We are absolutely experiencing an increase in demand ... and I view it as a long-term trend," she said.

All these trends are not only complicating the generation side of the equation, but the transmission side, as well. Alliant Energy President and CEO Lisa Barton described the electric

grid as “the largest synchronous machine in the world” and offered a picture that would be familiar to many people.

“An analogy that works well is the U.S. highway system,” Barton said, which is constantly evolving with new on- and off-ramps on interstate highways, efficient secondary highways, other roads and streets and constant construction and repairs.

For travelers of all types, that system must work efficiently 24 hours a day, seven days a week.

The electric transmission grid is similar: It is never static; requires regular construction and repairs; and it must be reliable and cost-effective for users. Today’s electric transmission world is complicated by the need to juggle those needs in an environment dominated by regulatory hurdles that are sometimes inconsistent.

“[Transmission line siting] processes were put together decades ago and don’t necessarily match the urgency of today,” ATC’s Mogensen said. Delays and lawsuits can slow transmission projects that are needed to match rising demand for power.

Such delays can “really stifle the economic growth for the state,” she added.

ATC is a part of the Midcontinent Independent System Operator (MISO) network, which extends from Manitoba, Canada, to Louisiana. It balances the power grid throughout, shipping power to where it’s needed when there are spikes in demand. Those spikes can be triggered by weather and even natural disasters.

Alliant Energy’s Barton likened the system to a “Rubik’s Cube” for solving questions of reliability, system resiliency,

growth and affordability. But it is not without its problems.

Dairyland’s Ridge noted that certain energy sources can be hundreds of miles from where the power is needed. It took 13 years to win permits for a transmission line to carry wind power about 100 miles and only two years to build it.

“The very same groups that focus on renewable energy being our sole source of energy are the same type of groups that are suing us as we try to build these projects,” Ridge said. He added Dairyland works in four states that have “four very different state regulatory and climate-related laws,” which suggest federal regulatory coordination could be better.

ATC’s Mogensen noted Wisconsin should adopt a “right of first refusal law” that gives incumbent utilities the right to build transmission projects that connect to existing infrastructures, potentially without a competitive bidding process. Indiana, Iowa, Michigan, Minnesota, Nebraska, South Dakota and North Dakota have such laws. Similar laws in Wisconsin have yet to clear the Legislature.

Despite the complex nature of expanding the transmission grid to meet today’s energy demands, Jeff Keebler, chairman, president and chief executive officer of Madison Gas and Electric (MGE), thinks it’s the job of utilities to do so. Public utilities cannot pick up and move like a retail store or factory — they’re here to serve the needs of people in their respective territories in a balanced manner.

“We have been planning this system for 100 years,” Keebler said. “Do we need to build more? Absolutely. Are we capable of doing that? 100 percent.”

It’s all a matter of balance. ●

*Tom Still is the past president of the Wisconsin Technology Council.*



*Photo courtesy of Dairyland Power Cooperative*

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