

CUSTOMER & BUSINESS SOLUTIONS NEWSLETTER

ITC MIDWEST • SPRING 2025



ITC MIDWEST, GREAT RIVER ENERGY AND XCEL ENERGY MOVE FORWARD WITH UPPER MIDWEST'S FIRST 765 kV ELECTRIC TRANSMISSION BACKBONE

PROJECT WILL BOLSTER REGIONAL RELIABILITY AND MINIMIZE ENVIRONMENTAL IMPACT

Several energy providers launched their plan to provide long-term electric reliability for customers by developing the Upper Midwest's first 765 kilovolt (kV) transmission project, which will meet the significant growth in electricity use projected in the coming decades and improve access to new energy sources needed to serve communities throughout the region.

In February, ITC Midwest, Great River Energy and Xcel Energy filed Notice of Intent to Construct, Own and Maintain the new 765 kV electric transmission line with the Minnesota Public Utilities Commission. This notice kicks off the permitting, public outreach and environmental review process overseen by the Commission and is the first step in project development. Similar notices will be filed in other states as part of the development process.

"This transmission line will provide significant benefits to our communities, ensuring we meet the unprecedented growth in their demand for electricity while keeping costs low for homes, farms and businesses," the companies said. "Some estimates project electric use to double over the coming decades in our region. The 765 kV line is key to maintaining reliability while maximizing the efficient use of land and reducing the overall impact to landowners."

ITC Midwest, Great River Energy and Xcel Energy will develop the 765 kV transmission project in several segments. The line will connect to the existing transmission grid in eastern South Dakota and travel approximately 410 miles across southern Minnesota to Wisconsin, also connecting into the regional grid in Wisconsin and Iowa. The line will connect the Lakefield, Pleasant Valley and North Rochester substations in Jackson, Mower and Olmsted counties.

The transmission line was one of several approved in December by the region's grid operator, the Midcontinent Independent System Operator (MISO), as part of the second set of projects in its Long-Range Transmission Plan.

In this historic portfolio, MISO approved 24 projects totaling \$21.8 billion in transmission investment including several 345 kV projects in Minnesota, North Dakota and South Dakota, as well as this 765 kV transmission backbone infrastructure. The companies worked with MISO and other stakeholders for several years to develop these transmission solutions as part of a multi-phase plan to bolster the reliability of the region's electric grid.

While this would be the first 765 kV transmission line in the Upper Midwest, this extra high voltage has been used in other parts of the United States for decades. **A single 765 kV electric transmission line can deliver approximately the same amount of electricity as six 345 kV transmission lines with similar land impacts and structure heights as existing high-voltage transmission lines.**

The transmission line is anticipated to be in service by 2035.



"This transmission line will provide significant benefits to our communities, ensuring we meet the unprecedented growth in their demand for electricity while keeping costs low for homes, farms and businesses."



FOR THE
GREATER GRID

IN THIS
ISSUE

- Partnership Optimizes Transmission System
- ITC Midwest at CBJ Energy Symposium
- ITC Midwest Improves System Reliability

PARTNERSHIP OPTIMIZES TRANSMISSION SYSTEM IN IOWA TO BENEFIT CUSTOMERS

ALLIANT ENERGY, ITC MIDWEST AND NEWGRID DELIVERING SOLUTIONS TO ENHANCE THE ELECTRIC GRID, PROVIDING COST SAVINGS AND INCREASED RELIABILITY FOR CUSTOMERS

Alliant Energy is partnering with its transmission provider, ITC Midwest, and a congestion monitoring and mitigation company, NewGrid, to optimize use of the regional transmission system in Iowa. Together, portions of Iowa's transmission system are being reconfigured to provide cost savings as well as increased reliability for customers and the region.

The partnership is using topology optimization, known as a grid-enhancing technology, to increase overall transmission system capacity and reduce transmission congestion, which can impact the electric grid by creating bottlenecks that limit the flow of electricity.

Temporarily reconfiguring the transmission system under certain conditions is analogous to temporarily diverting traffic away from congested roads to make transportation flow more smoothly. Relieving congestion allows more cost-effective energy to flow more easily through the transmission system to customers.

"The use of topology optimization as an innovative grid solution has put Iowa at the forefront in getting more out of the existing grid and relieving congestion costs," said Jeff Ripp, Associate Vice President of Grid Solutions and Environmental Strategy, Alliant Energy.

The solutions implemented have resulted in over \$30 million in estimated savings for Alliant Energy customers since 2021 by allowing the utility to purchase more cost-effective electricity, including from renewable resources that would otherwise be stranded behind bottlenecks. Reliability for customers has also increased as the enhancements reduce the risk of system overload and help ensure a steady flow of electricity. Solutions implemented in 2023 and 2024 were estimated to reduce overload risk by 39% for the impacted area.

"We appreciate the support from ITC Midwest and NewGrid as we continue to proactively identify opportunities to provide value to our customers and the communities we serve in Iowa," said Ripp.

"At the same time, this partnership helps to ensure robust transmission infrastructure is in place as we further diversify our company's energy mix."

NewGrid analyzes congestion impacting Alliant Energy customers and identifies potential upcoming high congestion impact events. The Massachusetts-based company then develops and recommends grid reconfiguration solutions, such as opening and closing breakers in substations, to ease congestion by redirecting electricity flow from

bottlenecks to areas of the grid with underutilized capacity. These reconfigurations help direct the flow of energy on the grid, much like how GPS helps vehicles reach their destinations by avoiding congested routes.

The use of system reconfiguration to optimize topology is a tool that ITC Midwest has been utilizing for more than 15 years, including working with Alliant Energy and NewGrid for the past few years. Using the tool has allowed the regional transmission service provider to enable new generation resources to maximize their production before all upgrades are in place. ITC Midwest plays a major role in identifying and vetting these configurations for both reliability and economics as part of MISO's evaluation process.

"As an independent transmission provider, our goal is to reduce overall system congestion costs as we don't have visibility into the costs of our customers," said ITC Manager of Operational Planning Abubaker Elteriefi. "This project provides a way to measure the benefits that our largest customer – Alliant Energy – is receiving from the actions we are taking, which is positive for all of our customers."

ITC Midwest evaluates the feasibility and performance of the reconfigurations and implements them following review and approval from the Midcontinent Independent System Operator (MISO). MISO has operating guidelines in place to reconfigure the grid as needed to optimize topology and maximize system capacity under a variety of operations conditions. ITC Midwest's highest priority is to ensure the safe and reliable operation of the electric transmission grid.

"The collaboration between Alliant Energy and ITC Midwest coupled with the expertise of NewGrid is an example of how our utility companies work together to benefit energy consumers," said ITC Midwest President Dusky Terry. "We are always interested in initiatives that can drive value for electricity customers while at the same time maintaining a safe, reliable and resilient electric grid."

Since 2022, about 500 reconfigurations have been deployed throughout ITC Midwest's transmission system.



DUSKY TERRY DISCUSSES TRANSMISSION AT CBJ ENERGY SYMPOSIUM

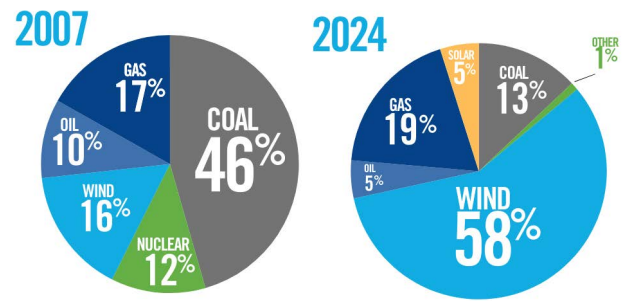
ITC Midwest President Dusky Terry provided an overview of ITC Midwest and the need for continued electric transmission buildout during the Corridor Business Journal Energy Symposium, held on April 16 in Cedar Rapids. The inaugural event also included leaders from Alliant Energy, MidAmerican Energy and NextEra Energy, who focused on various aspects of the energy sector.

Dusky emphasized that Iowa’s electric grid is reliable and resilient, but noted changing demands are driving the need for investment. Some of the key points Dusky made during his presentation included:



- ITC Midwest took over a system that was not meeting reliability expectations, requiring an infusion of investment to rebuild the system. The company’s investments have led to a 79% reduction in transmission outages since 2007.
- Although the expenditures were necessary to improve reliability, ITC Midwest is mindful of the rate impact to customers.
- To facilitate the transition to renewable energy, ITC Midwest built nearly 300 miles of new 345 kV projects as part of the regionally cost-shared MISO MVP portfolio introduced in 2011.
- Today, wind energy accounts for 58% of the generating capacity interconnected to the ITC Midwest system. Over the past 17 years, ITC Midwest has connected 45 new generators representing nearly 5,000 MW of renewable energy to the grid.
- Iowa is projected to have the first significant electricity demand growth in decades, which requires additional investment in the transmission grid.
- ITC Midwest is currently developing the next round of major MISO Long-Range Transmission Plan (LRTP) projects to improve system reliability and resilience, increase system capacity and enable lower-cost energy resources to power economic development in Iowa.
- The LRTP portfolio is critical to support the new data centers planned for the Cedar Rapids area, and general growth in the Cedar Rapids-Iowa City corridor.

ELECTRICITY GENERATION BY FUEL TYPE CONNECTED TO THE ITC MIDWEST SYSTEM



In a reference to Governor Reynolds’ Energy Bill and proposed ROFR legislation, Dusky asserted that public policy certainty is essential for Iowa-based utilities to build future transmission and ensure it is in place to meet the growing demand for electricity. Without ROFR, he explained that major regional transmission projects will be delayed, resulting in negative consequences for economic development in the state.

Dusky closed by noting that the electric grid is one of the largest, most dynamic and most complex systems in the world, and it is critically important for our daily lives. The ITC Midwest team remains focused on operating a safe, reliable and secure grid for the benefit of electricity consumers.

DEV25

THE DEV 25 CONFERENCE WILL BE HELD ON MAY 14 AT PRAIRIE MEADOWS IN ALTOONA, IOWA.

We’re proud to announce our keynote speaker, John McElligott, the World’s First “Frontier Futurist.”

Think of this keynote as being visited by two different versions of the future: one where you serve AI and the other where AI serves you. That’s precisely what Ancient Wisdom in the Age of Artificial Intelligence delivers.

[REGISTER NOW](#)

[HOTEL ACCOMMODATIONS](#)

Visit IowaUtility.org for more information. For additional questions, please contact callen@iowautility.org

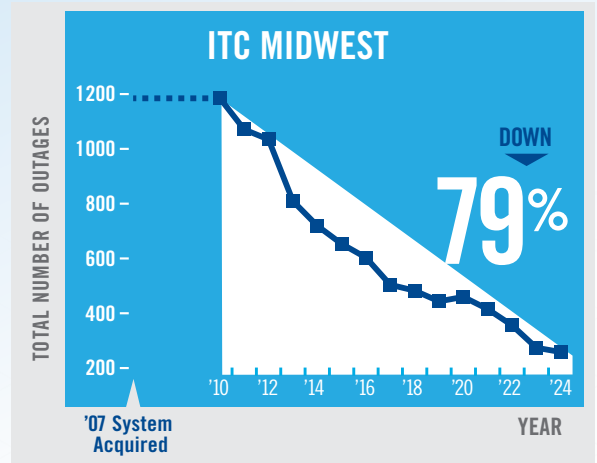
ITC MIDWEST REDUCES OUTAGES BY 79% SINCE 2007

RELIABILITY CONTINUES TO IMPROVE, DRIVING VALUE FOR CUSTOMERS

- The 79% reduction in transmission outages over the past 17 years saves electricity consumers hundreds of millions of dollars each year.
- This is a testament to ITC Midwest’s sustained, targeted capital investments and ongoing operations and maintenance program.
- ITC Midwest works with stakeholders across its service territory to make our communities stronger, grow our local economies and support the quality of life we all enjoy.
- New transmission infrastructure supports economic growth and development.

Through investments in the electric grid, coupled with our operational performance and maintenance activities, ITC Midwest continues to improve the grid’s performance and drive value for electricity consumers.

OUTAGE DECREASE UNDER ITC OWNERSHIP
3-year rolling averages



ITC MIDWEST • SPRING 2025 PARTNERS IN BUSINESS MEETINGS

You’re invited to join us for the Spring 2025 Partners in Business meetings. We are excited for a great lineup of presentations. Please note the change of schedule below for these meetings, with the first day in Albert Lea and the second day in Cedar Rapids.

Partners in Business meetings help keep our stakeholders and other important partners updated on ITC Midwest activities and projects. Through these meetings, we work to build connections and share information that benefits stakeholders and allows them to maximize the benefits of our investments in the regional grid. We look forward to seeing you!

TUESDAY
MAY 6 9:30 am – 2:30 pm CT

Wedgewood Cove Golf Club
2200 W 9th St, Albert Lea, MN 56007
Also hosted live on Microsoft Teams

WEDNESDAY
MAY 7 9:30 am – 2:30 pm CT

Kirkwood Conference Center
7725 Kirkwood Blvd SW, Cedar Rapids, IA 52404
Also hosted live on Microsoft Teams

REGISTRATION

Click below to register. You will be sent a confirmation email with a calendar appointment attached that corresponds to the location you select. If you would like other guests to attend, please have them use the link below to register.

[CLICK HERE TO REGISTER](#)

ITC MIDWEST CUSTOMER AND BUSINESS SOLUTIONS TEAM

Please let our Customer and Business Solutions Team know when your organization has personnel changes so we can keep our communications contact list current and provide you with the latest news and information from ITC Midwest.

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