



Iowa Environmental Council

MISO'S LONG RANGE TRANSMISSION PLANNING IN IOWA: TRANCHE 1

February 2023

The clean energy transition requires a responsive, connected and reliable transmission system. In order to retire fossil fuel sources, deploy new renewables, integrate dispatchable battery storage and enable more demand response, a robust transmission network is needed both in Iowa and nationally.

In July 2022, MISO (the Midcontinent Independent System Operator) approved the Tranche 1 Long-Range Transmission Planning (LTRP) portfolio, which will bring eighteen new transmission projects to the region, including three lines located entirely in the State of Iowa and two lines running partially through the state.

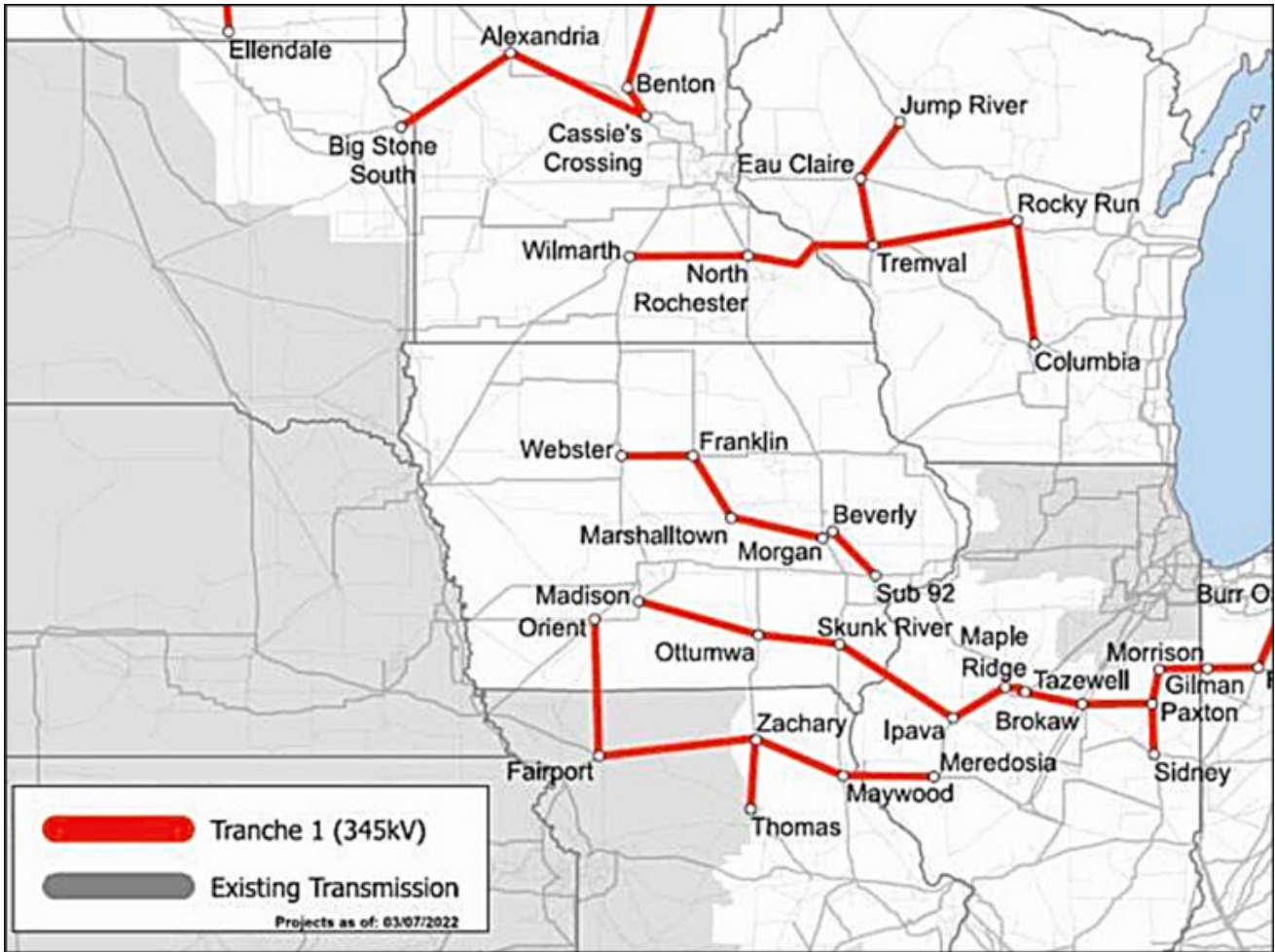
With over 2,000 miles of transmission lines added in a multi-state region, this portfolio of projects is the largest of its kind in the U.S. Benefits from these projects add up to \$37.5B over 20 years, far exceeding the \$10.4B cost of construction. [1]

These projects will enable 53 gigawatts of wind, solar, battery storage, and hybrid (batteries plus wind or solar) projects in the northern and central regions of MISO. [2]

The Tranche 1 portfolio will enable the following benefits in Iowa over two decades [3]

- **8,158 megawatts** of new renewable and battery storage capacity in Iowa
- **36,300 jobs** in clean energy construction along with additional transmission construction jobs

Tranche 1 Proposed Routes



Proposed Iowa Routes [4]

Webster – Franklin – Marshalltown – Morgan Valley

Possible Counties: Webster, Wright, Hamilton, Franklin, Hardin, Grundy, Marshall, Linn, Tama and Benton

Beverly – Sub 92

Possible Counties: Linn, Johnson and Muscatine

Madison – Ottumwa – Skunk River

Possible Counties: Madison, Warren, Marion, Lucas, Monroe and Wapello

Skunk River – Ipava

Possible Counties: Wapello, Jefferson, Henry, Lee and Des Moines (Connects in Illinois)

Orient – Fairport

Possible Counties: Adair, Madison, Union and Ringgold (Connects in Missouri)

Process and Construction Timeline:

Approval of transmission projects can be years-long and requires a multi-agency stakeholder process at the federal, state and local levels. Once the process is completed, construction is expected to begin from 2024 to 2025 and estimated to be finished between 2028 and 2030.

Tranche 2

MISO's Long-Range Transmission Planning will include four total tranches. Tranche 2's planning process will focus on the Midwest sub-region and could include additional transmission proposals for Iowa.

The Importance of Improved Transmission

- Increase grid reliability by decreasing risk of blackouts and outages
- Lower fuel costs and price spikes when renewable energy is available but cannot get delivered because of congestion on the lines [5]
- Provide electricity to Iowa when needed and allow for export of excess clean energy
- Enable clean energy projects waiting in the MISO Generator Interconnection Queue

Sources

1. [PowerPoint Presentation \(misoenergy.org\)](#), p. 59
2. [MISO board approves \\$10.3B transmission plan to support 53 GW of renewables \(Utility Dive\)](#)
3. [Renewable Energy & Jobs Impacts via MISO's New Portfolio of Regional Transmission Lines \(Clean Grid Alliance\)](#)
4. [Section of Semi-Annual Transmission Report \(iowa.gov\)](#)
5. [Transmission congestion is costing rural communities | Center For Rural Affairs - Building a Better Rural Future \(cfra.org\)](#)