



Minnesota Transmission Issues

February 1, 2022

The Transmission Challenge

- ◆ Minnesota has been implementing robust policies to support the development of renewable energy in the state since the 1990s
 - Tax policy
 - Renewable preference
 - Renewable portfolio standards
 - Practical Siting processes
- ◆ As a result of these policies, Minnesota is sixth in the nation with 5,616 MW of operational wind and solar
- ◆ The addition of new renewables to Minnesota has a large impact on economic activity in the state
 - In 2020, Minnesota counties received \$14 million in tax revenues from operating wind
 - A University of MN study estimated that six new wind projects totaling \$1.1 billion in investment would generate \$550 million of economic benefit to MN during construction, and \$44 million annually, including \$8.7 million in annual income to Minnesotans

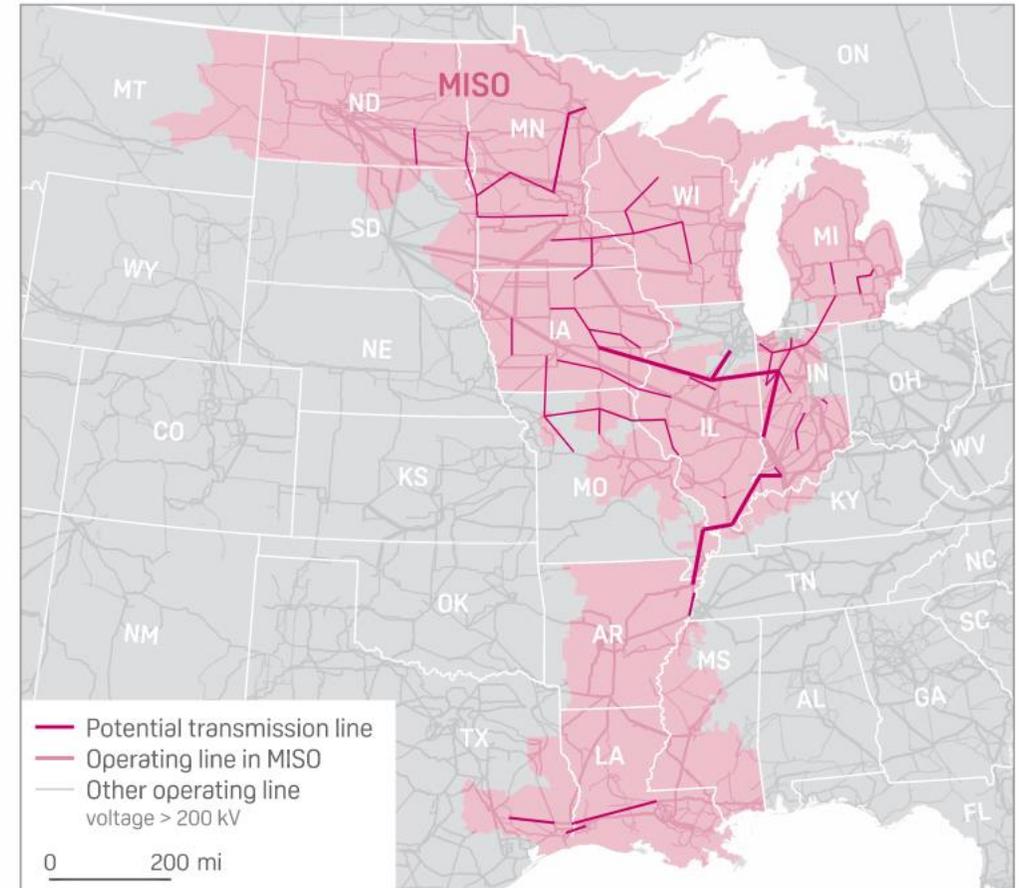
The Transmission Challenge (cont'd)

- ◆ While other states continue to surge in developing and constructing utility scale renewables, projects in Minnesota have nearly come to a halt
 - MISO delays in interconnection studies
 - Interconnection study results showing no injection capacity unless new lines are built
 - Lag in planning, permitting and constructing new lines.
- ◆ The lack of available transmission capacity is causing Minnesota to lose out on new renewable installations during a time of unprecedented activity
 - According to the American Clean Power Association, in the first three quarters of 2021 17,500 MW of contracts for new wind and solar projects were signed
 - Minnesota's share of that was one contract for 253 MW, or 1.4% of that total
 - Minnesota has permitted and near-permitted projects in advanced development that cannot get contracts because interconnection capacity is unavailable and upgrade costs are high.

MISO Long-Range Transmission Plan (LRTP)

- ◆ MISO LRTP is proposing a number of new lines in four tranches to upgrade the system and **allow more interconnection of clean energy**
- ◆ The plan was to be considered by the MISO board in Dec 2021, but has now been delayed to May 2022
- ◆ Once approved, the resulting lines can take up to ten years to develop, permit and construct
- ◆ To preserve renewable jobs and grow the economic benefit of clean energy in Minnesota, we need to figure out how to get there faster

POTENTIAL MISO REGIONAL TRANSMISSION PROJECTS



Source: S&P Global Platts, MISO

How do we move forward?

- ◆ CapX 2020 worked – and it can work again
- ◆ The legislature and/or the Public Utilities Commission could require MN Transmission owners to develop an expansion plan to interconnect up to 5,000 MW of renewables by 2030
- ◆ Double circuiting of some of the CapX 2020 lines could be a part of this (but is not a solution in itself)
- ◆ The legislature could consider incentives for utilities to construct and own new transmission
- ◆ Look at leveraging federal infrastructure dollars where possible



Questions

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Current State of MISO Interconnection Process

- The MISO study process has been continuously delayed.
- Most recent delays are a result of delayed SPP Affected Facilities Studies.
- Recent SPP Affected Facilities Studies have resulted in some MISO projects having limited or zero injection rights.
- A recent FERC Order (concerning Lookout Solar) has resulted in restudies which will further delay MISO 2018 DPP results.
- MISO to offer GIAs irrespective with SPP issues listed above

