



MINNESOTA ENERGY CONNECTION AND REGIONAL TRANSMISSION UPDATE

2023

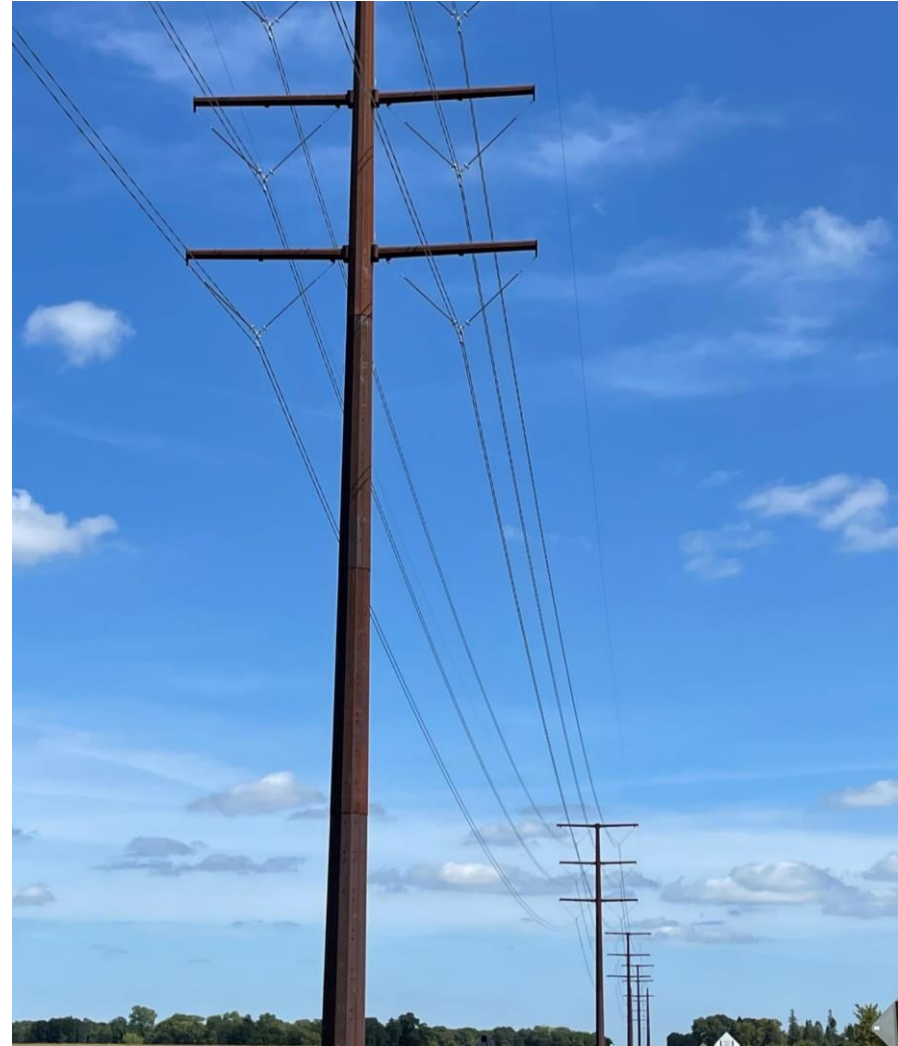
Minnesota Energy Connection

- Continue Minnesota's clean energy transition
- Replace coal with renewable energy
- Re-use existing grid connections at Sherco power plant
- Deliver reliable, affordable energy
- Meet PUC direction to file application for transmission line
- Meet Minnesota 100 x 2040 law; further Xcel Energy carbon-free energy vision



Project description--MNEC

Double-circuit 345-kV
transmission line (approx. 160-
180 miles) between Lyon County,
Minn. and retiring Sherco power
plant near Becker



MINNESOTA REGULATORY PROCESS

- **Minnesota Public Utilities Commission approvals required**
 - Certificate of Need
 - Route Permit



CERTIFICATE OF NEED

- Describes needs the transmission line will address
 - Includes evaluation of size, type and timing of project
 - Energy forecasts, costs and alternatives
- Public process with opportunity for input and involvement
- Visit: [MN.Gov/PUC](https://mn.gov/puc) for information (click on 'edockets' and search docket number 22-131)



ROUTE PERMIT APPLICATION

- Minnesota Public Utilities Commission must approve a Route Permit application prior to construction
- Route development ongoing—asking for feedback
- Held open houses in February-March; additional open houses in May/June
- Identify at least two route options
- Commission may select one option or combination of options identified



KEYS TO ROUTE DEVELOPMENT

- Identify river crossing locations (Minnesota and Mississippi Rivers)
- Review land use (existing, planned and expected) with local government officials including road use agencies
- Work with state and federal agencies to meet regulations
- Engage landowners for input and feedback



ROUTE DEVELOPMENT

Routing priorities include:

- Follow existing linear corridors
- Minimize crossings of existing transmission lines
- Minimize crossings of existing roadways
- Minimize dead-end transmission structures
- No homes within 150-foot ROW
- Avoid high risk permitting areas

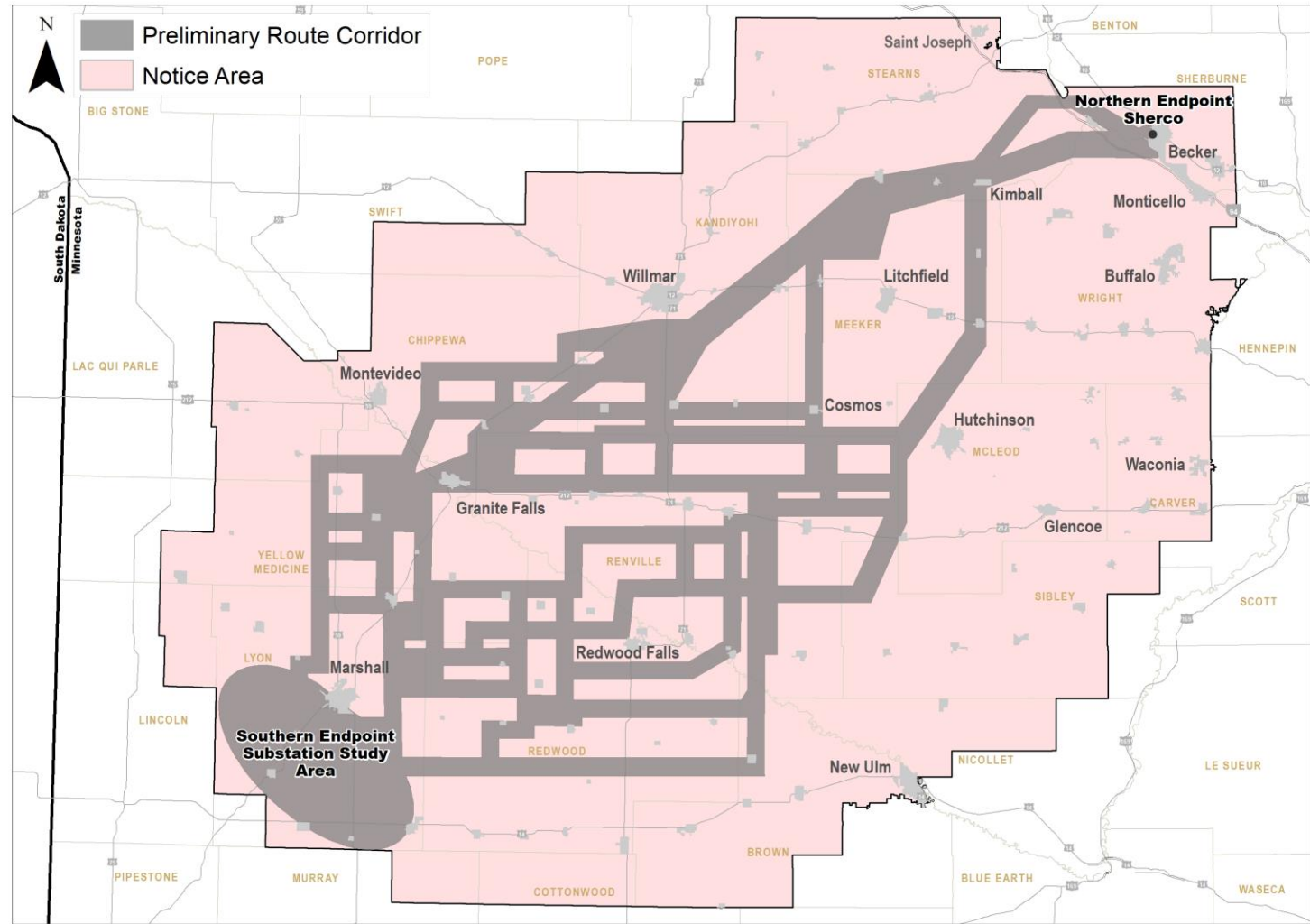


Route corridor map

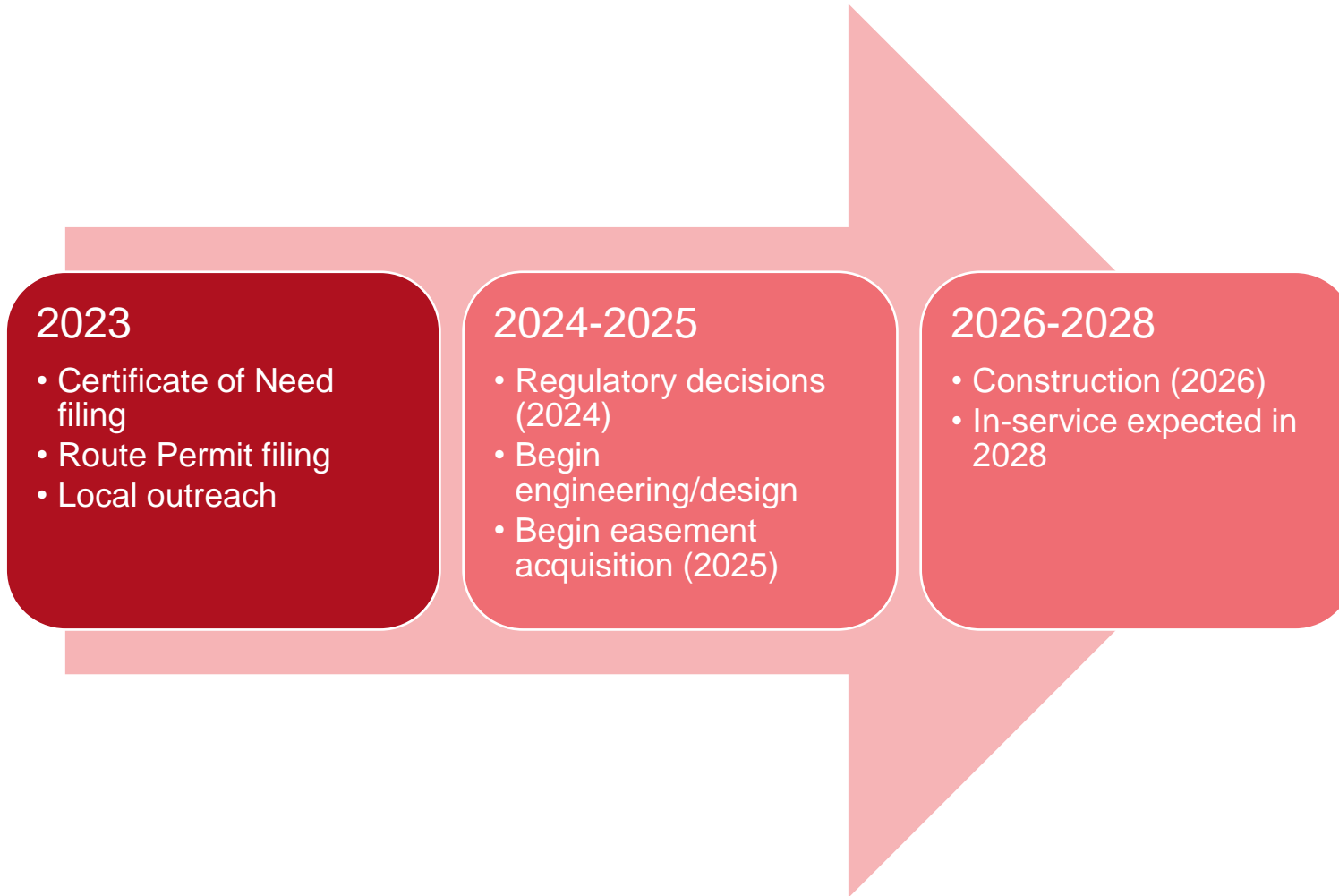
Present corridors to landowners in February-March 2023

Ask for feedback on corridors and route options, including land use and other important issues (prefer by late March)

Briefing local governments, state agencies



Expected timeline



CONTACT US

- Project information available at:
 - [Web: www.MNEnergyConnection.com](http://www.MNEnergyConnection.com)
 - Phone: 888-292-4714
 - Email:
MNEnergyConnection@xcelenergy.com



UPPER MIDWEST REGIONAL PROJECTS

New and expanded transmission infrastructure



L RTP projects

18 new projects approved by MISO throughout the Midwest (totaling \$10 billion)

Tranche 2 projects currently under MISO design and review



MISO LRTP PROJECTS

- Mankato-Mississippi River
 - Increase load capability of existing transmission line
 - Replace 115-kV structure with double-circuit 345-kV and 115-kV structures (345-kV is new circuit)
 - Add 345-kV transmission line between Faribault and North Rochester
 - Replace 161-kV double-circuit with 345-kV double circuit from North Rochester to Mississippi River (additional infrastructure in Wisconsin)



BIG STONE SOUTH-ALEXANDRIA-BIG OAKS

- Add 345-kV circuit between Alexandria-Monticello/Becker
 - Second circuit on existing Fargo-Alexandria-St. Cloud/Monticello
 - Build Big Oaks substation on Sherco property near Becker (formerly Cassie's Crossing substation)
 - Expand Alexandria substation
- New single-circuit 345-kV line from Big Stone South substation in northeast South Dakota to Alexandria substation
 - Missouri River Energy Services and Otter Tail Power leading route development



CONGESTION UPDATE

- Improvements already reducing congestion
 - Substation upgrades—some complete and under design
 - Breaker configurations
- Temperature and weather rating changes
- Brookings Second Circuit
 - Certificate of Need expected in 2023



Questions?