

# JAMESTOWN – ELLENDALE 345 KV PROJECT

Request for a Certificate of Public Convenience & Necessity (CPCN)



**Jamestown to Ellendale**



17 PU-24-91 Filed 07/08/2024 Pages: 14  
Informal Hearing Presentation  
Otter Tail Power Company / Montana-Dakota Utilities Co.

# AGENDA

- Description of Applicants
- Project Description
- Project Need
- Project Benefits
- Project Alternatives
- MISO Long Range Transmission Plan
- Multi-Value Projects under MISO's Tariff
- Project Schedule
- Compliance with CPCN Requirements
- Conclusions

# APPLICANTS

## **Otter Tail Power Company (Otter Tail)**

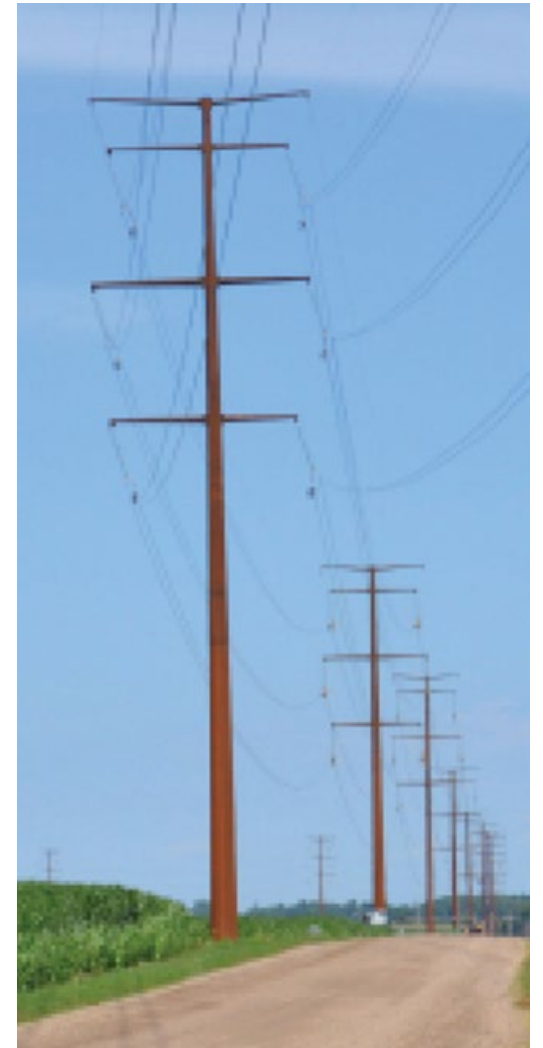
- Investor-owned electric utility headquartered in Fergus Falls, MN;
- Serves over 133,000 customers spanning 70,000 square miles in eastern North Dakota, northeastern South Dakota and western Minnesota;
- Owns ~6,000 miles of transmission lines and ~1,100 MW of generation capacity;
- Transmission-owning member of the Midcontinent Independent System Operator (MISO)
- Certified copy of Otter Tail's Articles of Incorporation on file with the Commission (PU-09-677), as well as a 2024 certificate of good standing (PU-23-039)

## **Montana-Dakota Utilities Co. (Montana-Dakota)**

- Investor-owned electric utility headquartered in Bismarck, ND;
- 128,000 customers served over 86,000 square miles in western and central North Dakota, eastern Montana and north central South Dakota;
- Owns ~3,400 miles of transmission lines and ~709 MW of generation capacity;
- Transmission-owning member of the Midcontinent Independent System Operator (MISO)
- Certified copy of Montana-Dakota's Articles of Incorporation on file with the Commission (PU-08-710), as well as a 2024 certificate of good standing (PU-08-710)

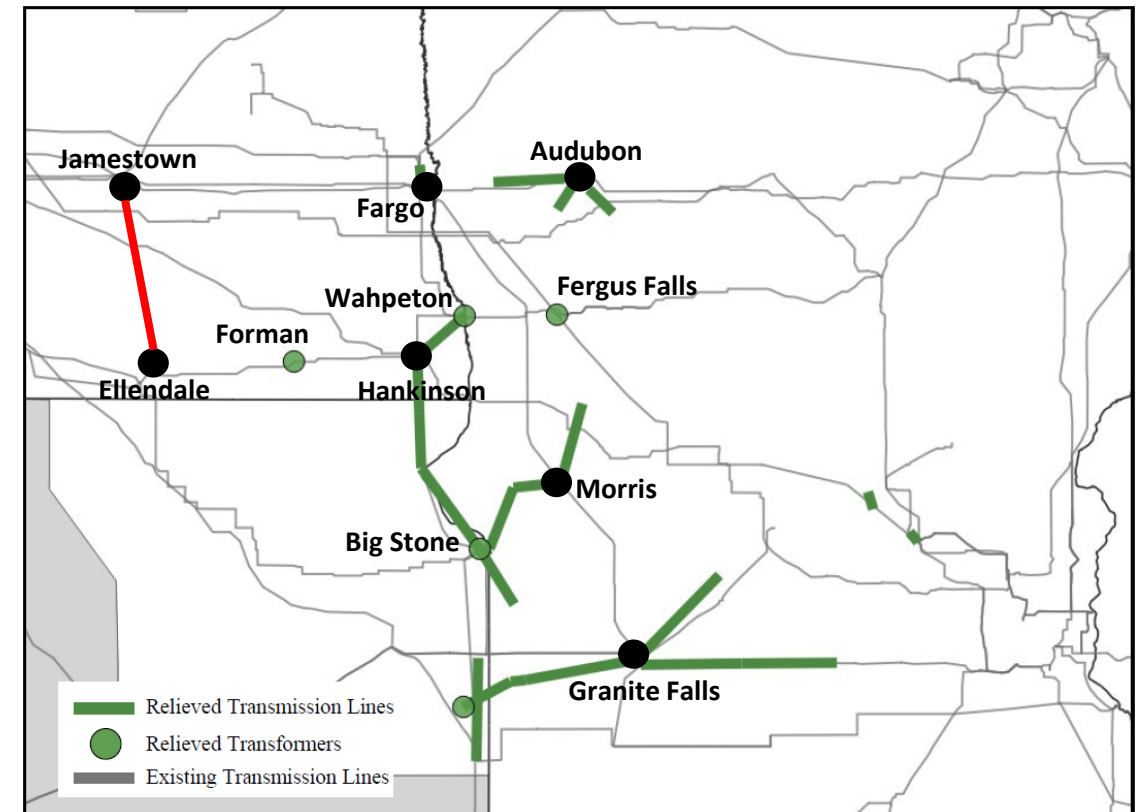
# PROJECT DESCRIPTION

- Project involves a new 345 kV transmission line between Otter Tail's existing Jamestown Substation and Montana-Dakota's existing Ellendale Substation with underlying substation upgrades.
  - 345 kV Transmission Line: 85 – 95 miles long;
  - Jamestown Substation Expansion: New 345 kV termination;
  - Ellendale Substation Expansion: New 345 kV termination;
  - Maple River Substation Expansion: Replace existing 345/230 kV transformers;
  - Twin Brooks (SD) Substation Expansion: Install new 345 kV reactors.
- Anticipated typical structures
  - Double circuit (one circuit installed initially);
  - Steel monopole, self-supporting structures with average height of 150 feet;
  - Concrete foundations with between 4 - 6 Structures per mile.
- Estimated cost = \$440 million



# PROJECT NEED

- Existing 230 kV system in eastern North Dakota, eastern South Dakota and west-central Minnesota is heavily constrained for different seasons of the year, especially during peak conditions.
- Reliability concerns during system intact conditions and N-1 contingencies
  - Excessive loadings
  - Voltage depressions
- The Project, along with the Big Stone South – Alexandria – Big Oaks 345 kV project, most effectively addresses these reliability concerns.



# PROJECT BENEFITS

- Enhanced reliability
  - Address loading and voltage violations
- Increased transmission capacity
  - Enable new commercial and industrial loads
  - Accommodate new electric generation projects
  - Reduce transmission constraints to export more North Dakota generation
- Increased resilience to extreme weather events
  - Reliability benefits to Jamestown and Ellendale load pockets
- Support local residents, political subdivisions and businesses
  - Landowner payments
  - Political subdivisions: property tax, sales tax, special assessments, etc.
  - Local suppliers/services: road improvements, tree clearing, concrete, gravel, fuel, meals, lodging, etc.
- Increased employment opportunities



Ensure electric  
reliability



Increase resiliency  
to extreme weather  
conditions



Reduce  
transmission  
congestion



Increase access to  
low-cost energy

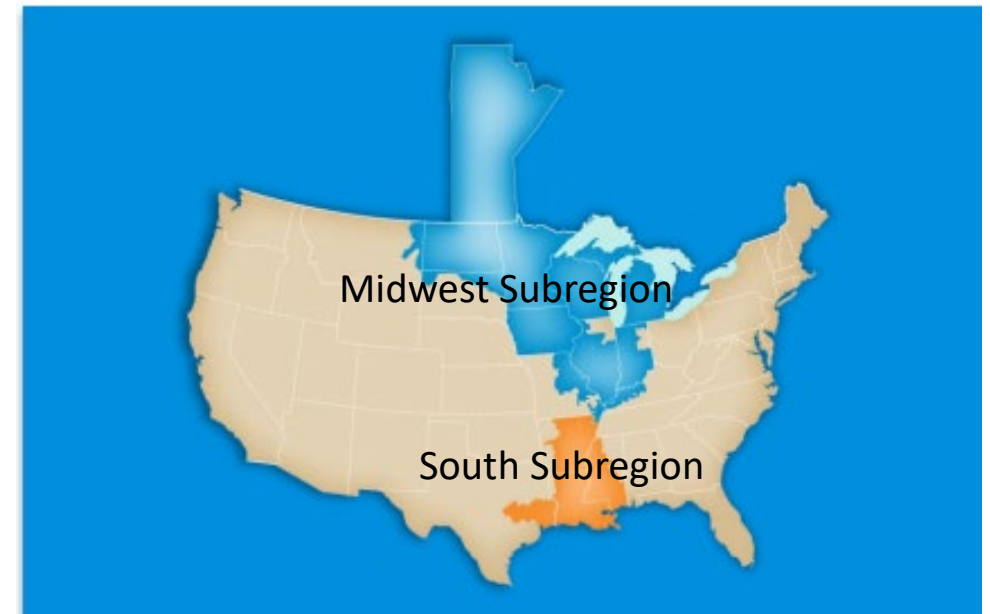
# PROJECT ALTERNATIVES

#	Project 1	Project 2
-	Jamestown – Ellendale 345 kV Line	Big Stone South – Alexandria – Big Oaks 345 kV Line
1	Jamestown – Ellendale 345 kV Line	Big Stone South – Alexandria 345 kV Line
2	Jamestown – Ellendale 345 kV Line	Big Stone South – Hankinson – Fergus Falls 345 kV Line
3	Jamestown – Ellendale 345 kV Line	Big Stone South – Hazel Creek – Blue Lake 345 kV Line
4	Jamestown – Ellendale 345 kV Line	Big Stone South – Alexandria 345 kV line + Big Stone South – Hazel Creek – Blue Lake 345 kV Line
5	Jamestown – Ellendale 345 kV Line	Big Stone South – Breckenridge – Barnesville 345 kV Line

- The Project is common to every combination of alternative projects considered by MISO to address the issues on the heavily constrained 230 kV system in eastern North Dakota, eastern South Dakota and west-central Minnesota.

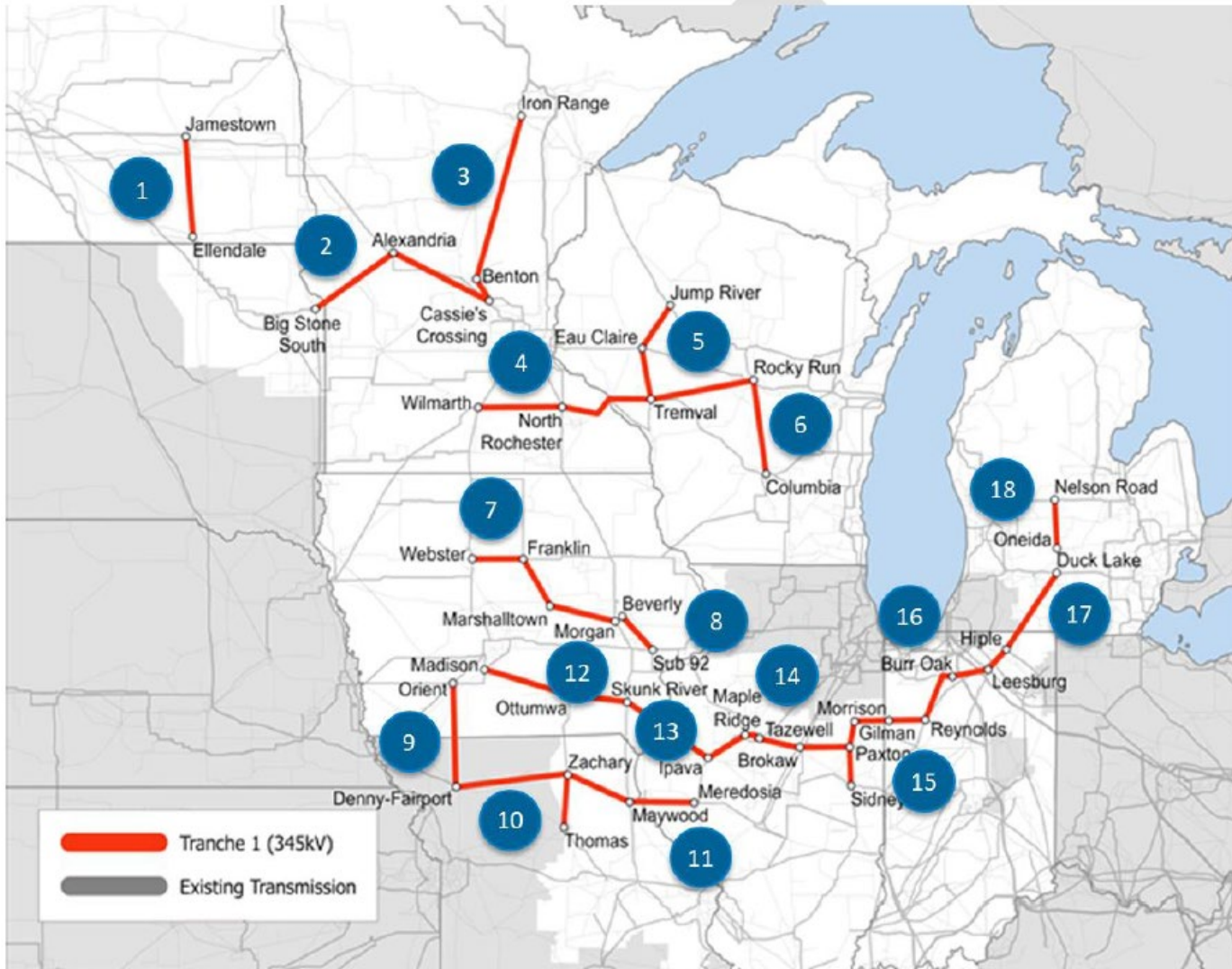
# MISO'S LONG RANGE TRANSMISSION PLAN (LRTP)

- MISO's Long Range Transmission Plan (LRTP) was initiated in 2020 with the objective to provide an orderly and timely transmission expansion plan that results in a transmission system that is reliable, cost-efficient, accessible, and flexible.
- Tranche 1: Approved by MISO in July 2022 for the Midwest subregion.
- Tranche 2: Focused on the Midwest subregion.
  - Tranche 2.1: MISO approval anticipated in Dec. 2024.
  - Tranche 2.2: MISO studies to follow in 2025/2026.
- Tranche 3: Focused on South subregion.
- Tranche 4: Intraregional project(s) between Midwest subregion and South subregion.





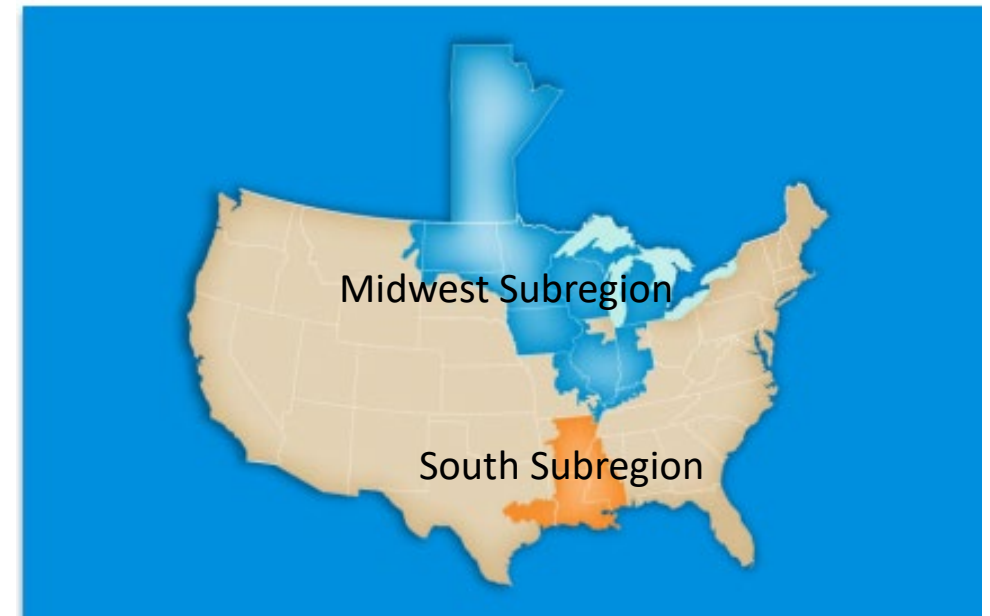
# MISO'S LRTP TRANCHE 1 TRANSMISSION PORTFOLIO



- MISO approved 18 new transmission projects in July 2022 as part of the Tranche 1 portfolio.
- Represents over 2000 miles of new and upgraded high voltage transmission lines totaling over \$10 billion of investment.
- New transmission projects approved as Multi-Value Projects (MVPs).

# MULTI-VALUE PROJECT (MVP) UNDER MISO'S TARIFF

- Multi-Value Projects (MVPs):
  - (1) address transmission issues that are a violation of a reliability standard;
  - (2) provide multiple types of economic value across a broad area with a benefit-to-cost ratio of 1.0 or higher; or
  - (3) support the reliable and economic delivery of energy.
- Cost for MVPs in the Tranche 1 Portfolio are allocated on a pro-rata basis to all load in the MISO Midwest subregion based on energy usage.
  - Otter Tail's ND load ratio share = 0.61%
  - Montana-Dakota's ND load ratio share = 0.47%



# JETX PROJECT SCHEDULE

## 2023: 1<sup>st</sup> Half

- Define Study Area
- Develop Corridors
- Public Meeting #1
- Landowner Outreach

## 2024: 1<sup>st</sup> Half

- Start Securing Land Rights
- CPCN Submitted to ND PSC

## 2025: 2<sup>nd</sup> Half

- PSC Decision on ND Route Permit
- Tree Clearing
- Pre-construction Activities

1<sup>st</sup> Half

2<sup>nd</sup> Half

1<sup>st</sup> Half

2<sup>nd</sup> Half

1<sup>st</sup> Half

2<sup>nd</sup> Half

1<sup>st</sup> Half

2<sup>nd</sup> Half

1<sup>st</sup> Half

2<sup>nd</sup> Half

1<sup>st</sup> Half

2<sup>nd</sup> Half

**2023**

**2024**

**2025**

**2026**

**2027**

**2028**

## 2023: 2<sup>nd</sup> Half

- Develop Routes
- Public Meeting #2
- Landowner Outreach
- Identify Preferred Route
- Surveys

## 2024: 2<sup>nd</sup> Half

- PSC Decision on CPCN
- Route Permit Submitted to ND PSC
- Public Hearing(s)

## 2026: 1<sup>st</sup> Half

- Start Construction
  - Foundations
  - Structures
  - Conductor

## 2028: 2<sup>nd</sup> Half

- Finish Construction
- Energization
- Restoration

# COMPLIANCE WITH CPCN REQUIREMENTS

NDCC	Description	Compliance
49-03-01.4	Electric public utility or electric transmission provider does not violate or threaten to violate any of the provisions of section 49-03-01 through 49-03-01.5 or does not interfere with or threaten to interfere with the service or system of any other electric public utility or rural electric cooperative.	<ul style="list-style-type: none"><li>• The Project will not provide direct retail service and will not interfere with the service provided by any utilities in the area.<ul style="list-style-type: none"><li>• The Project provides regional transmission capacity, among several other benefits, that can be accessed by any interested stakeholder.</li></ul></li></ul>
49-03-02 (1)	Certified copy of articles of incorporation	<ul style="list-style-type: none"><li>• Otter Tail has articles of incorporation available in Case No. PU-09-677.</li><li>• Montana-Dakota has articles of incorporation available in Case No. PU-08-710.</li></ul>
49-03-02 (1)	Evidence showing that the applicant has received the consent, franchise, permit, ordinance or other authority of the proper public authority	<ul style="list-style-type: none"><li>• The Applicants will obtain all applicable permits from federal, state and local authorities prior to construction.<ul style="list-style-type: none"><li>• The Applicants anticipate filing a joint certificate of corridor compatibility and route permit application with the Commission in Q3 2024.</li></ul></li></ul>

# CONCLUSIONS

- Public convenience and necessity will be served by the Applicants' construction, ownership and operation of the Project because of the reliability and economic benefits provided to North Dakota customers.
- The Project is part of MISO's Long Range Transmission Plan (LRTP) approved as part of the 2021 MISO Transmission Expansion Plan ("MTEP21") and is integral to delivering the reliability and economic benefits of the Tranche 1 Portfolio.
- The Applicants are fit, willing and able to construct, own and operate the Project as proven through their articles of incorporation, certificates of good standing and success in past transmission projects.

# QUESTIONS



Jamestown to Ellendale

