JETx
Jamestown to Ellendale

Jamestown to Ellendale

345-kV Transmission Line Update

August 2025

OTTER TAIL POWER COMPANY

MONTANA-DAKOTA UTILITIES CO.

Presentation Outline

- Background
- Project Description
- Routing Process
- Regulatory Status
- Schedule
- Benefits
- Conclusions

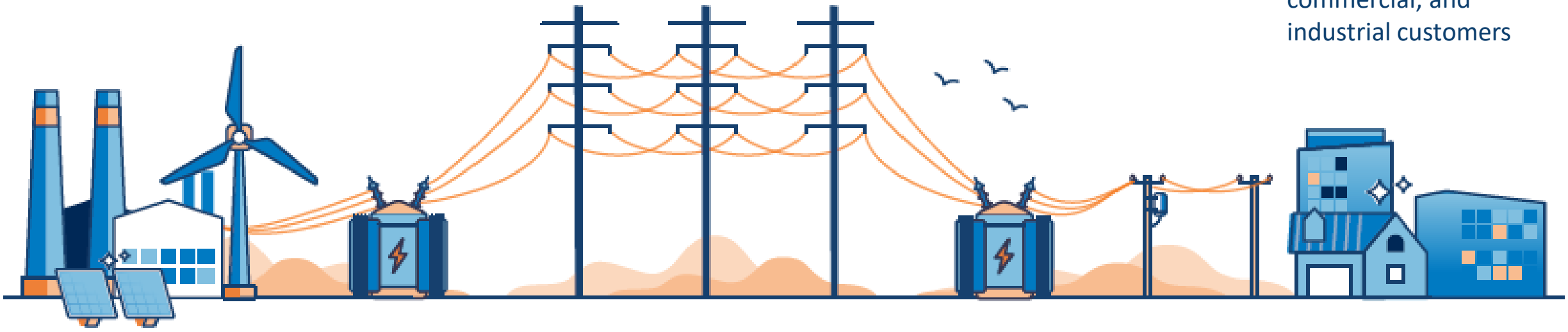
JETx
Jamestown to Ellendale

Overview of Electrical Grid

1 Electricity can be generated in many ways, including coal-fired plants, wind power, combustion turbines, solar power, and hydroelectric plants.

3 Transmission lines move high-voltage electricity long distances from where it's generated to where it'll be used.

5 Distribution lines move low-voltage electricity to residential, commercial, and industrial customers



2 Electricity connects to the high-voltage transmission system through a transformer.

4 Transformers lower the voltage of electricity for homes and businesses

Generation

Transmission

Distribution

MISO

Midcontinent Independent System Operator

- Independent, non-profit, member-based regional transmission organization responsible for keeping the power flowing across its region reliably and cost effectively.

- Key functions of MISO include:
  - Managing the flow of high-voltage electricity across 15 US states and the Canadian province of Manitoba;
  - Facilitating one of the world's largest energy markets;
  - Planning the transmission grid of the future.



MISO's reliability footprint and regional control center locations.

Otter Tail Power (OTP) and Montana-Dakota Utilities Co. (MDU) are members of MISO

Source: MISO Fact Sheet

JETx
Jamestown to Ellendale

MISO Long Range Transmission Planning

MISO initiated the Long-Range Transmission Plan (LRTP) in 2020 to identify future transmission projects needed within the 20-year horizon to:

(1) enhance electric reliability;
(2) increase grid resiliency to extreme weather events;
(3) reduce transmission congestion; and
(4) increase customer access to low-cost energy.

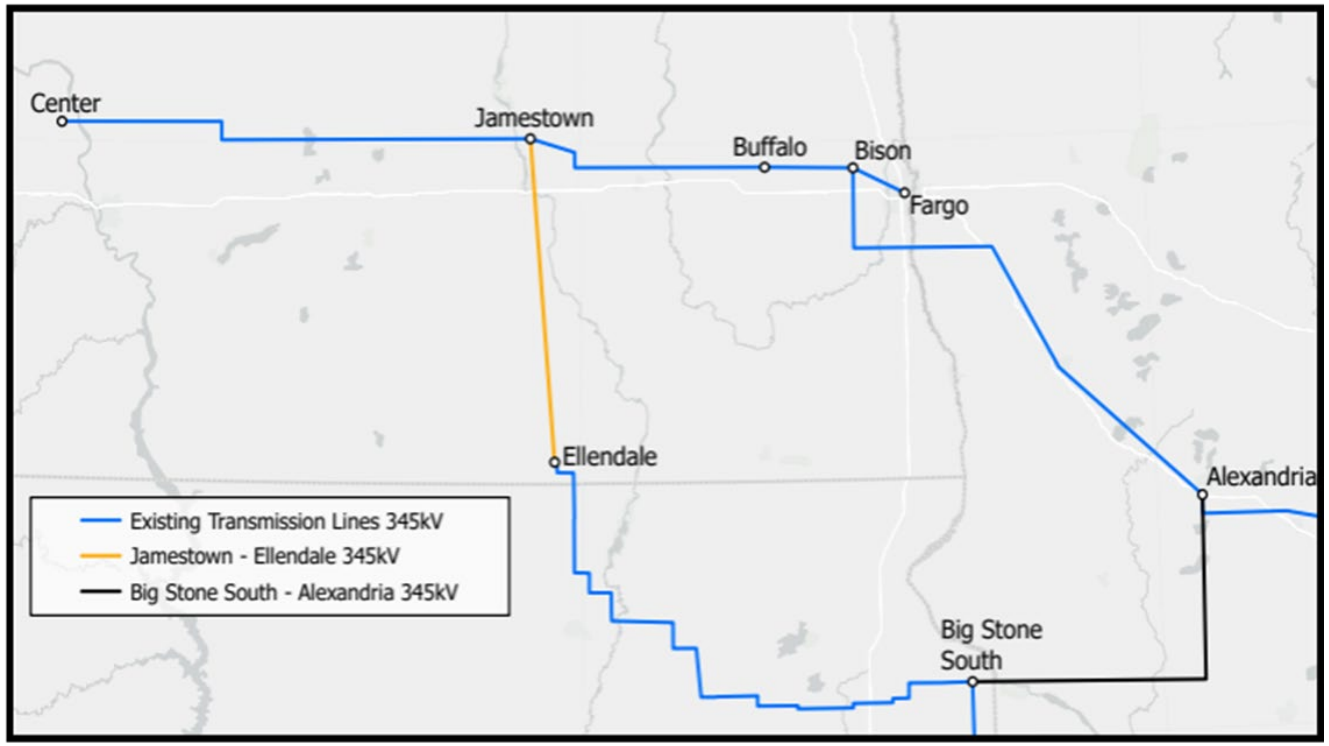


JETx
Jamestown to Ellendale

JETx Project Enhances Reliability

- OTP and MDU initially identified JETx as an essential project because it enhances reliability by creating a high-voltage transmission loop between Jamestown and Ellendale.
- This loop provides an alternative pathway to deliver electricity when other transmission lines are out of service.

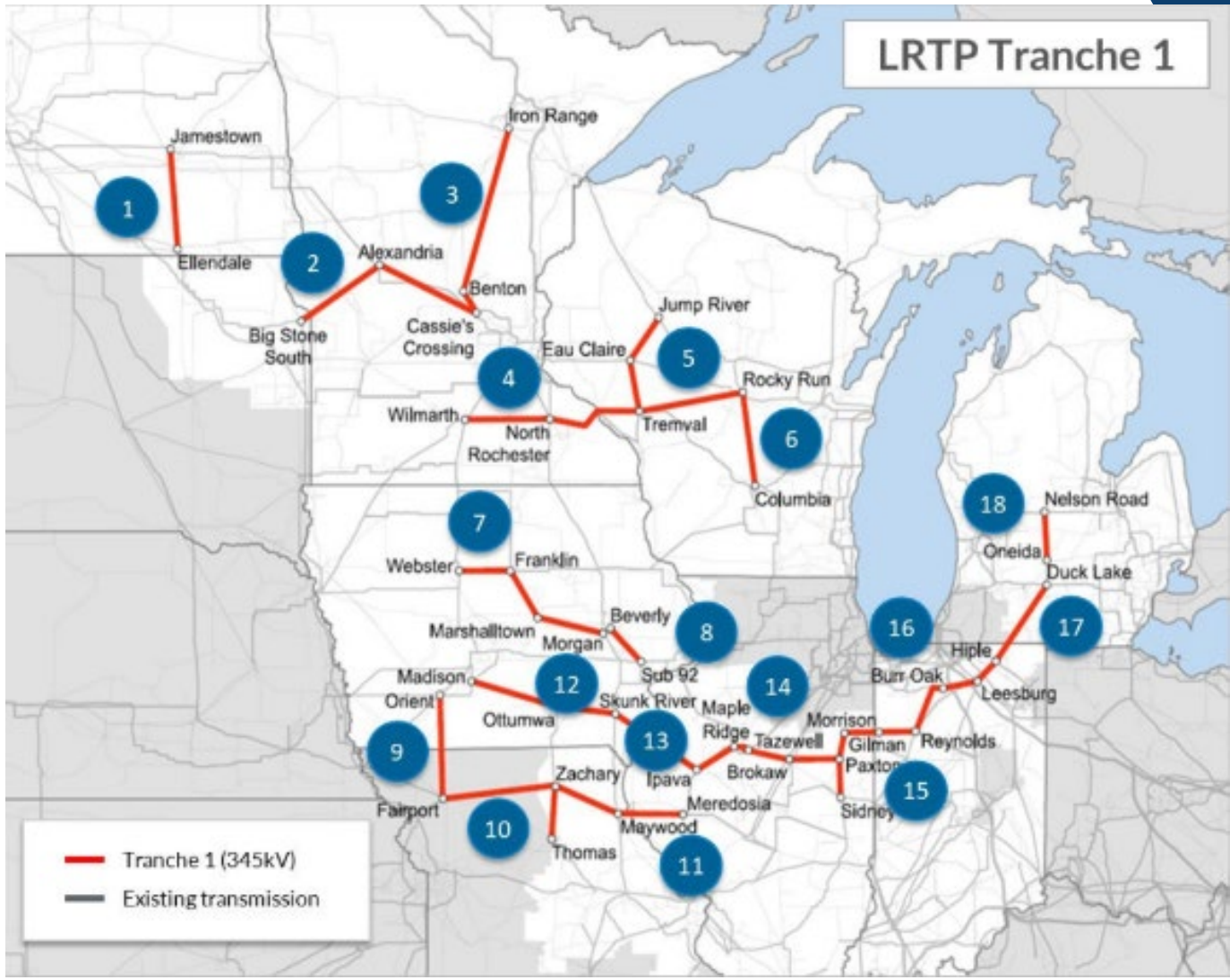
High-voltage 345-kV transmission system



JETx
Jamestown to Ellendale

MISO's LRTP Tranche 1 Portfolio

- MISO approved 18 new transmission projects in July 2022 as part of the Tranche 1 portfolio.
  - Applied Digital's load additions were **not** factored into need justification for Tranche 1 portfolio because electric service agreements with OTP (Jamestown) and MDU (Ellendale) occurred after Tranche 1 models finalized.
- New transmission projects approved as Multi-Value Projects (MVPs).



JETx
Jamestown to Ellendale

Multi-Value Projects (MVPs)

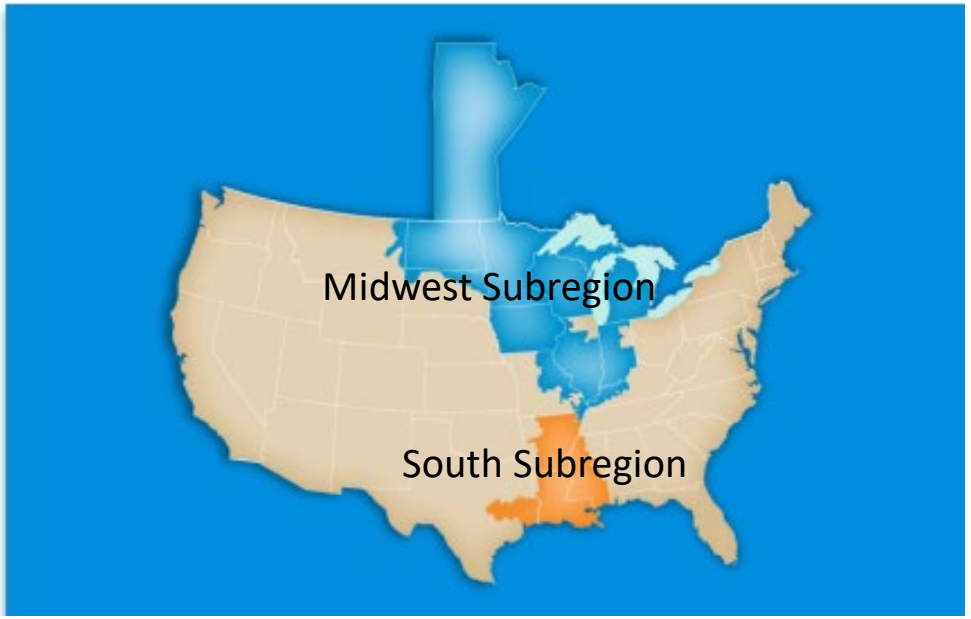
- Multi-Value Projects under MISO's Tariff:

  (1) address transmission issues that violate a reliability standard;

  (2) provide multiple types of economic value across broad area with benefit-to-cost ratio of 1.0 or higher; or

  (3) support reliable and economic delivery of energy.

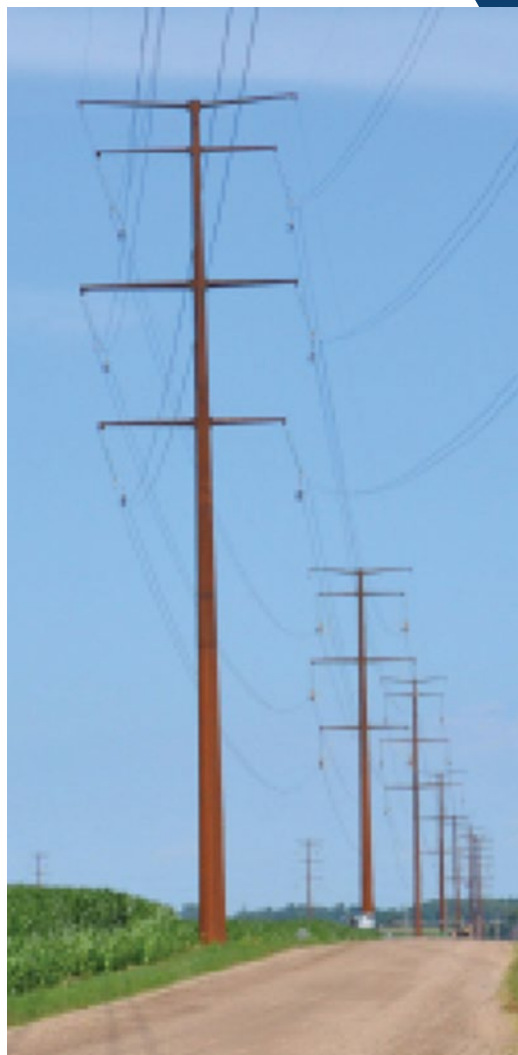
- Cost for Tranche 1 Portfolio is allocated on a pro-rata basis to all load in MISO Midwest subregion based on energy usage.



JETx
Jamestown to Ellendale

Project Description

- New, double circuit 345 kV transmission line between Otter Tail's existing Jamestown Substation and Montana-Dakota's existing Ellendale Substation.
  - 92 miles of 345 kV transmission line;
  - New 345 kV termination at Jamestown Substation;
  - New 345 kV termination at Ellendale Substation;
- Typical structures
  - Double circuit capable (one circuit installed initially);
  - Steel monopole, self-supporting structures;
  - Concrete foundations with between 4 - 6 Structures per mile.
- Estimated cost = $406 million



JETx
Jamestown to Ellendale

Routing Process

Guided by ND statutes in cooperation with landowners and agencies.

- Current route (150’ wide) includes approximately:
  - 175 unique landowners
  - 285 total parcels

- Approximately 73% of land rights have been secured.

- OTP and MDU have considered approximately 50 route adjustment requests from landowners.



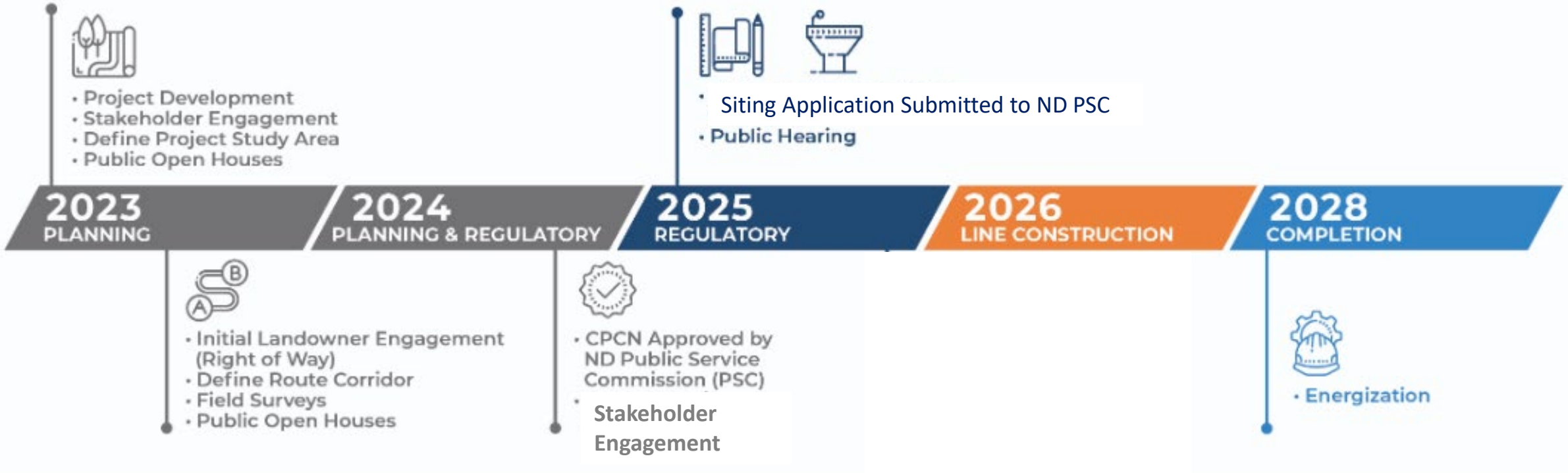
JETx
Jamestown to Ellendale

Regulatory Status

- Certificate of Public Convenience & Necessity approved by ND Public Service Commission (PSC) in November 2024.
- Combined application for Certificate of Corridor Compatibility and Route Permit filed with ND PSC in August 2025.
- Other applicable federal, state and local permits will be obtained prior to start of construction.

JETx
Jamestown to Ellendale

Project Schedule



JETx
Jamestown to Ellendale

Project schedule subject to change depending on a variety of factors.

JETx Project Benefits to ND

Enhanced Reliability

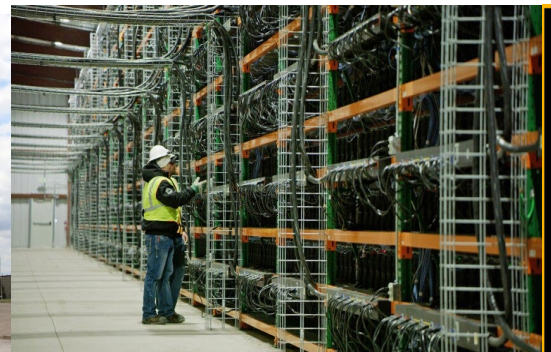
- Address reliability violations (loading and voltage levels).
- Creates high voltage loop between Jamestown and Ellendale.

Increased transmission capacity

- Reduce transmission constraints to enable higher power transfers in/out of ND
- Accommodate new electric generation projects
- Enable new commercial and industrial loads

DAKOTA SPIRIT AGENERGY





APPLIED DIGITAL



NDSP

JETx Project Benefits to ND (continued)

Increased resilience to extreme weather events

- Reliability benefits to Jamestown and Ellendale load pockets

Support local residents, political subdivisions and businesses

- Landowner payments
- Property tax, sales tax, special assessments, etc.
- Road improvements, tree clearing, concrete, gravel, fuel, meals, lodging, etc. benefits local businesses

Increased employment opportunities

- Local jobs from the development, construction and operation

JETx
Jamestown to Ellendale

NDSU Economic Impact Study

- NDSU estimated local economic impact in Stutsman, LaMoure and Dickey counties*
- Over six-year development period, JETx Project estimated to:
  - Support up to 510 jobs at peak of construction;
  - Result in total labor income of $94 million;
  - Generate $238 million in business volume; and
  - Result in $1.7 million in revenues to local government jurisdictions.

JETx
Jamestown to Ellendale

*Performed by Dean A. Bangsund and Nancy M. Hodur

Conclusions

- MISO has undertaken a multi-year planning effort called Long Range Transmission Plan (LRTP) to identify transmission necessary to enhance reliability.
- OTP and MDU identified the JETx Project as an essential transmission project for North Dakota.
- MISO approved the JETx Project as part of the LRTP Tranche 1 Portfolio.
- JETx Project, like all transmission projects, provides several benefits.
  - Reliability and Resilience;
  - Favorable economic impacts; and
  - Future economic development

JETx
Jamestown to Ellendale

JETx

Jamestown to Ellendale

Questions?

OTTER TAIL POWER COMPANY

MONTANA-DAKOTA UTILITIES CO.
A Subsidiary of MDU Resources Group, Inc.
In the Community to Serve®

Website: www.JamestowntoEllendale.com