



# Big Stone South to Ellendale 345kV Transmission Line

Henry Ford – Director Electric Transmission Development

EXHIBIT  
11



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PU-13-840  
Exhibit 11

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Pages: 16

- ⦿ Applicant overviews
- ⦿ MISO/Project development
- ⦿ Project overview
- ⦿ Structure design and construction
- ⦿ Ellendale Substation
- ⦿ Project outreach
- ⦿ Right-of-way update
- ⦿ Next steps

## Montana-Dakota Utilities Co.

- ⦿ Headquartered in Bismarck, North Dakota
- ⦿ Electric and/or natural gas service to parts of Montana, North Dakota, South Dakota, and Wyoming
- ⦿ Electric Service area covers about 88,255 square miles
- ⦿ Approximately 135,244 electric customers in 115 communities

## Otter Tail Power Co.

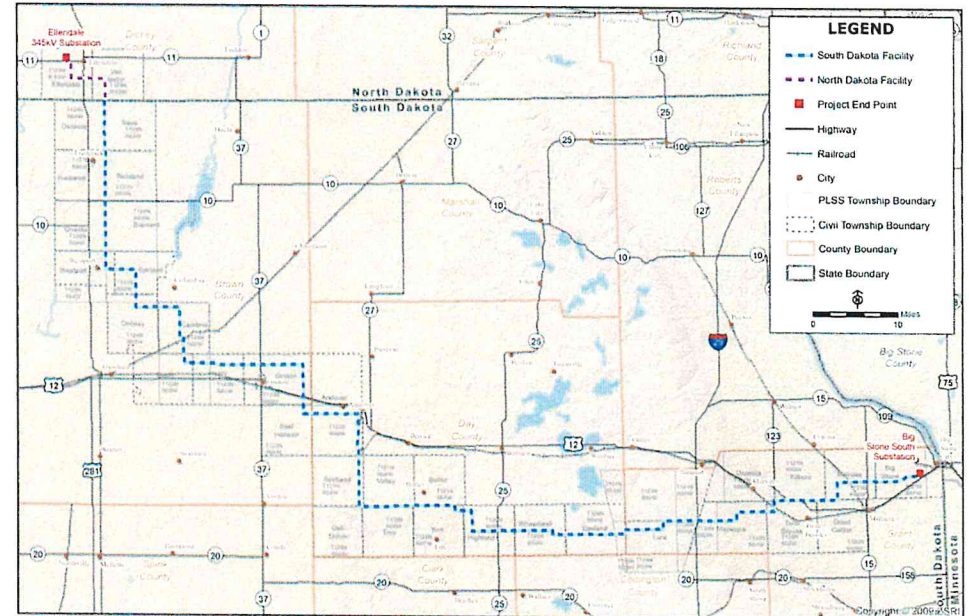
- ⦿ Headquartered in Fergus Falls, Minnesota
- ⦿ Electric service to parts of Minnesota, North Dakota, and South Dakota
- ⦿ Service area covers about 70,000 square miles
- ⦿ Approximately 129,400 customers in 422 communities

- ◎ MISO (Midcontinent Independent System Operator) consists of 47 transmission owning utilities including **Montana-Dakota Utilities** and **Otter Tail Power**.
- ◎ MISO is an essential link in the safe, cost-effective delivery of electric power across all or parts of 15 U.S. states and the Canadian province of Manitoba. As a Regional Transmission Organization, MISO assures consumers of unbiased regional grid management and open access to the transmission facilities under MISO's functional supervision.

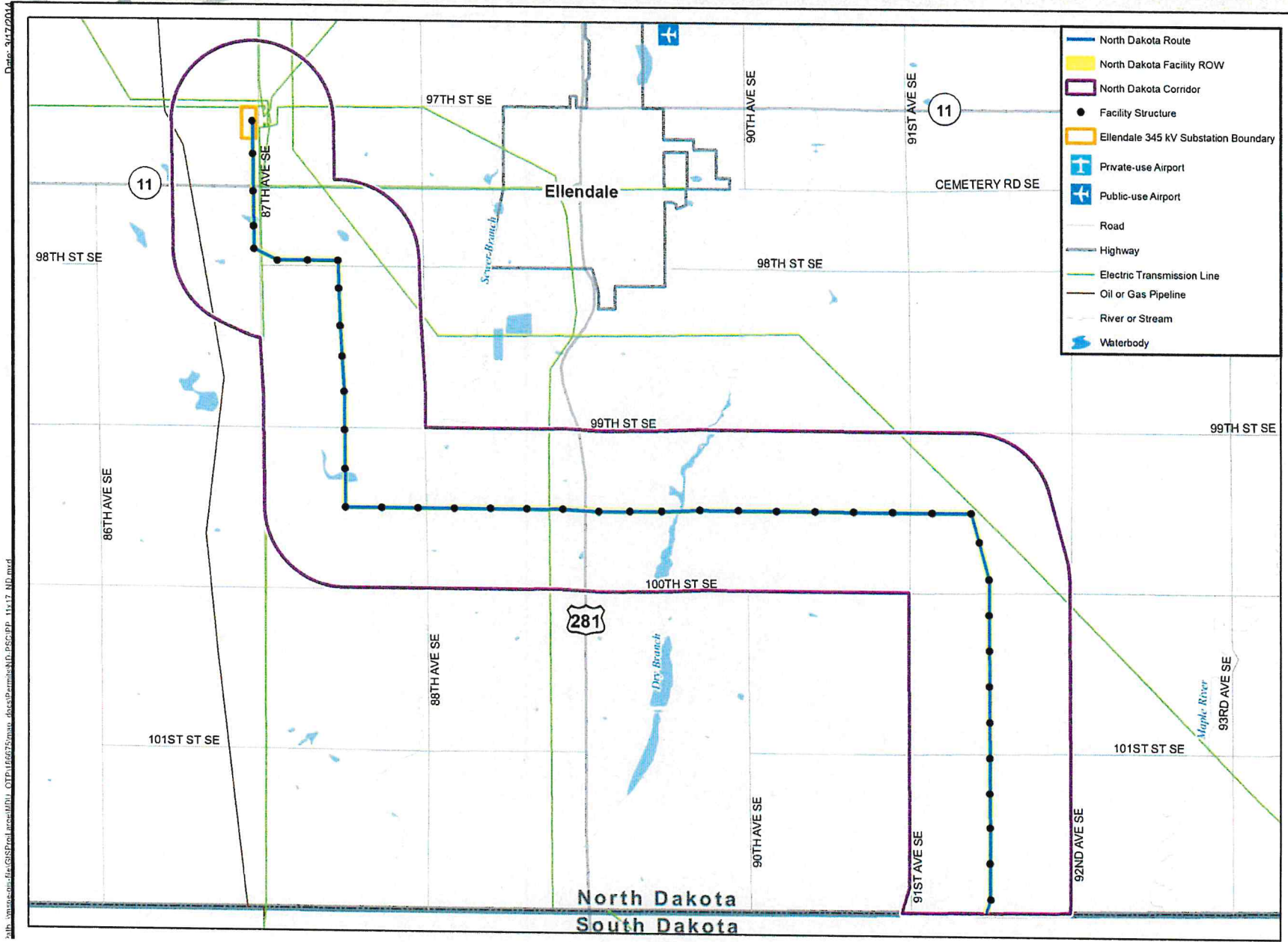
- ◎ Multi-value project (MVP)
  - Regional reliability
  - Economic value
  - Support for renewable energy public policy objectives
  
- ◎ On December 8, 2011 MISO approved a portfolio of 16 MVP projects which included the BSSE 345kV transmission line.
  
- ◎ The project could be constructed by any MISO member but MDU and OTP agreed to construct and own the project.

- ◎ Certificates of Public Convenience and Necessity (CPCN) were issued to both Montana-Dakota and Otter Tail on September 20, 2013.
- ◎ By issuing these certificates the ND PSC determined public convenience and necessity will be served by the construction & operation of these facilities and that OTP and MDU are fit, willing and able to provide this service.

- Joint project with Otter Tail Power Company and Montana-Dakota Utilities Co.
- New 345 kV transmission line
  - Ownership to be approximately 50% MDU and 50% OTP
- Approximately 160-170 miles
- Endpoints:
  - Big Stone South substation near Big Stone City, SD
    - OTP ownership
  - New Ellendale substation near Ellendale, ND
    - MDU ownership
- Anticipated project cost \$290-\$370 Million
- In service 2019

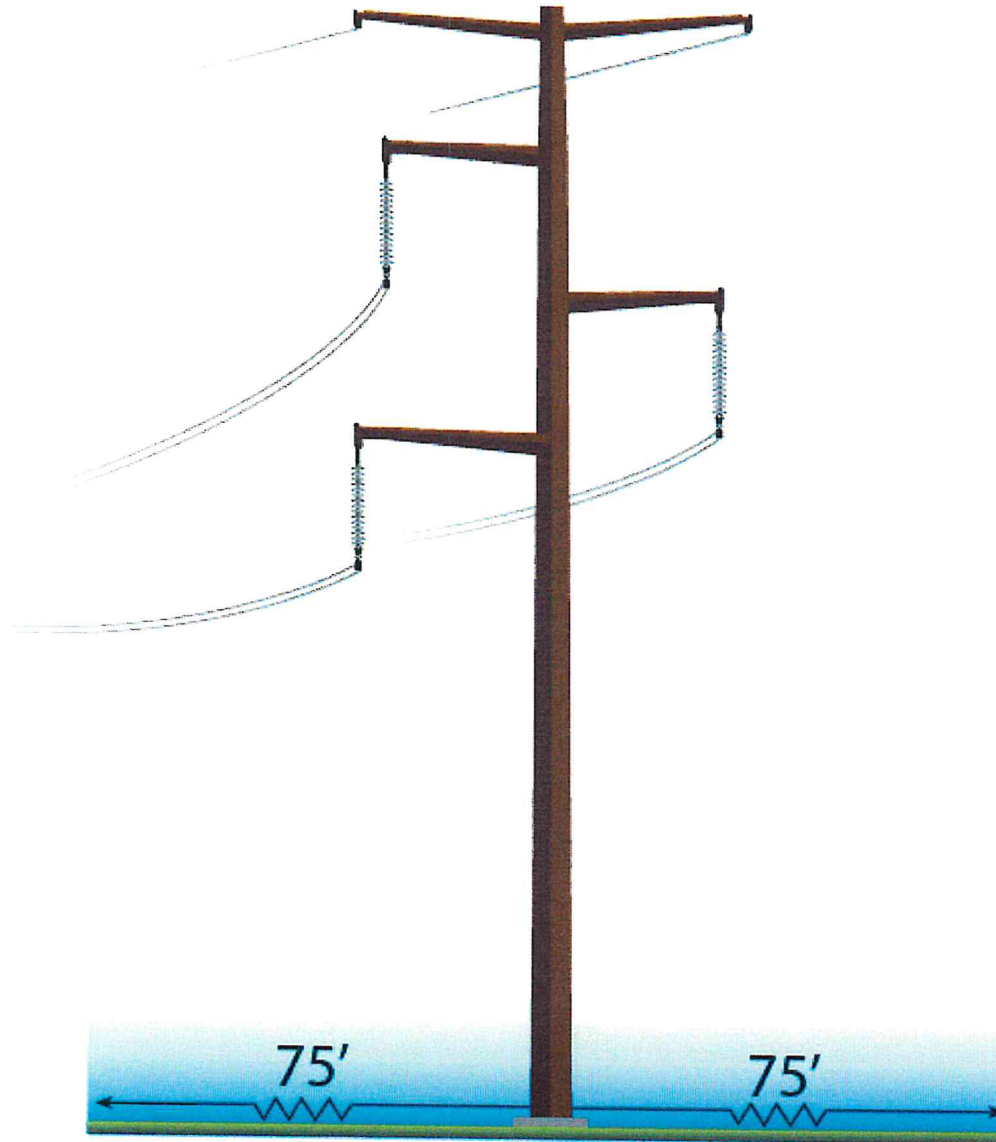


# North Dakota Corridor and Route



Date: 3/17/2014

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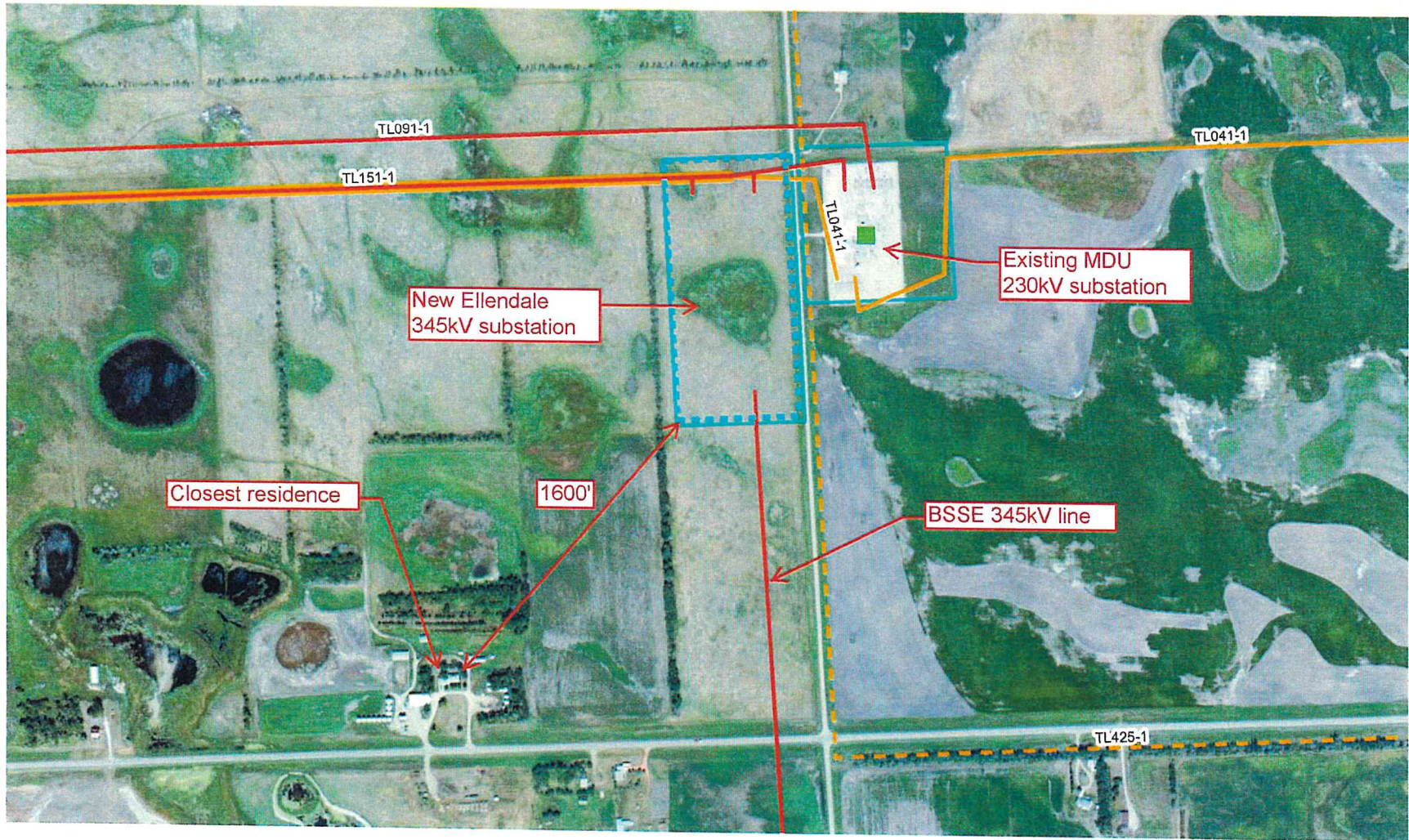


Average measurements	
Above-grade height	125 - 155 ft
Foundation diameter	6 - 11 ft
Span	700 - 1200 ft
Structures per mile	5 - 6
Minimum ground clearance	30 ft

- 1 Survey structure locations and identify ingress and egress locations.
- 2 Auger the holes where the structure poles will be set and pour foundation (if required).
- 3 Assemble the structure on the ground adjacent to the holes/foundation.
- 4 Lift structure and place in hole or on foundation.
- 5 String wires.
- 6 Restore right-of-way and energize line.



- ⦿ A new substation will be required for the project at Ellendale
- ⦿ Land has been purchased on the west side of 87<sup>th</sup> Avenue SE across the road from the existing MDU substation
- ⦿ A noise study was performed to assess impact on the nearest residence.
  - Results indicated noise levels for both transformer and corona noise are comparable to normal background noise.



- ◎ **Letters or postcards mailed** (September 2012, October 2012, February 2013, April 2013, May 2013, June 2013, August 2013)
- ◎ **Open house meetings** (October 2012 & February 2013)
- ◎ **Newsletters mailed** (November 2012, June 2013, October 2013, January 2014)
- ◎ **County meetings** (August 2012 & January 2013)
- ◎ **Interagency meetings** (August 2012 & January 2013)
- ◎ **Tribal Agency meetings** (October 2012, March 2013, May 2013, July 2013)

- ⦿ Started contacting impacted landowners on August 5, 2013 to begin the right-of-way easement option process.
- ⦿ As of April 1, 2014 100% of ND landowners who will have structures on their land have signed easement option agreements.
- ⦿ One ND landowner remains to sign an overhang agreement when he returns home in mid April.
- ⦿ We have also secured easement options on the first 1 ½ miles of line across the border into South Dakota so the border crossing is finalized.



MDU and OTP are committed to complying with the certification provisions and respectfully ask the approval of our request for a certificate of corridor compatibility and a route permit for this project.