

**Transmission Cost Recovery Rider  
Descriptions of Projects Proposed to be  
Eligible Under SDCL 49-34A-25.1**

The following projects were approved for recovery by the Commission in the Company's Transmission Cost Recovery Rider filing in Docket No. EL12-035 and re-affirmed for cost recovery most recently in Docket No. EL18-036:

- CapX2020 Brookings – Twins Cities 345 kV transmission line
- CapX2020 Fargo – Twin Cities 345 kV transmission line
- CapX2020 La Crosse-Local 345 kV transmission line
- CapX2020 La Crosse-MISO
- CapX2020 La Crosse-WI
- Glencoe – Waconia
- Sioux Falls Northern

The following projects were approved for recovery by the Commission in the Company's Transmission Cost Recovery Rider filing in Docket No. EL13-006 and re-affirmed for cost recovery most recently in Docket No. EL18-036:

- Bluff Creek – Westgate transmission line
- Chaska Area transmission line
- Minn Valley transmission line
- Big Stone – Brookings 345 kV Line
- Lake Marion – Burnsville
- Maple Lake – Annandale

The following project was approved for recovery by the Commission in the Company's Transmission Cost Recovery Rider filing in Docket No. EL15-030 and re-affirmed for cost recovery most recently in Docket No. EL18-036:

- Minot Load Serving Transmission Line

The following project was approved for recovery by the Commission in the Company's Transmission Cost Recovery Rider filing in Docket No. EL18-036 and re-affirmed for cost recovery most recently in Docket No. EL19-032:

- Huntley-Wilmarth 345 kV Transmission Line

The following projects were approved for recovery by the Commission in the Company's Transmission Cost Recovery Rider filing in Docket No. EL19-032:

- West St. Cloud – Black Oak
- Eau Claire 345 kV Upgrade
- Bayfront to Ironwood 88 kV
- La Crosse – Madison

### **Project Updates**

Below we discuss project scope changes and any significant variances between projects' current capital cost forecast and the forecast presented in last year's TCR Rider Petition.

- **Bayfront to Ironwood 88 kV**

This project is proceeding, but we have removed the project from the TCR Rider tracker. As discussed in our Petition, this project is located in Wisconsin and is being constructed by the Northern States Power Company – Wisconsin (NSPW) operating company. The Interchange Agreement between NSPM and NSPW dictates how costs are shared by the two operating companies. Costs for NSPW projects are not billed through the Interchange Agreement to NSPM customers during the project's construction and thus should not be recovered through the TCR rider until the project is placed in-service. Therefore, all costs for the Bayfront to Ironwood 88 kV project have been removed from the rider, and the Company will not propose to include this project in the rider until it is placed in-service.

- **Eau Claire 345 kV Upgrade**

This project is proceeding, but we have removed the project from the TCR Rider tracker. Like the Bayfront to Ironwood 88 kV project, the Eau Claire 345 kV Upgrade project is located in Wisconsin and is being constructed by the NSPW operating company. Costs for NSPW projects are not billed through the Interchange Agreement to NSPM customers during the project's construction and thus should not be recovered through the TCR rider until the project is placed in-service. Therefore, all costs for the Eau Claire 345 kW Upgrade project have been removed from the rider, and the Company will not propose to include this project in the rider until it is placed in-service.

- **West St. Cloud – Black Oak**

This project shows a cost decrease of approximately \$7.4 million since our last TCR proceeding. Most of this decrease (\$5.2 million) is because we reduced the scope of work for the project by segmenting out a portion into a new project called the Avon – Albany Rebuild project, discussed as a new project below. The full scope of work originally planned for the West St. Cloud – Black Oak project is still occurring, just split into two projects. We split the original West St. Cloud – Black Oak project and created Avon – Albany Rebuild as a separate project to be able to segment the line for better outage coordination and divide the amount of time the line would need to be de-energized for construction in order to mitigate the area’s system risk exposure. Additionally, we looked at construction resource levels and determined that splitting the construction into segments allows for better resource management and cost control. The additional reduction in project cost (\$2.2 million) can be attributed to these resource management and cost control savings.

## **New Projects**

The Company seeks eligibility determination for the following projects:

1. **Avon – Albany Line Rebuild**

### ***Project Description and Context***

The Avon – Albany Line Rebuild project will rebuild an approximately 7 mile segment of transmission line of the Company’s Line 0795. Line 0795 is a 63-year old 69 kV transmission line that originates at Great River Energy’s West St. Cloud Substation in St. Joseph, Minnesota and runs westerly approximately 25 miles to the Millwood Tap Switch in Freeport, Minnesota. This line is important because it serves the Company’s as well as other utilities’ distribution loads in the area.

This project was initially identified as part of the Company’s systematic Major Line Rebuild program. Through the Company’s Line Prioritization Matrix, the Company identified Line 0795 as being a poor performer due to its age and condition. The 1953 vintage line consists of direct embedded cedar wood poles. Many of the poles are past their useful life and over the years, many have been replaced through the Storm and Emergency program due to their poor condition. Continuing to replace singular structures is no longer an option due to the number of structures requiring replacement as well as the poor condition of the existing cross-arms and conductor.

The cross-arms show evidence of physical decay and the conductor has failed in several locations.

## **2. Belgrade – Paynesville Line Rebuild**

### *Project Description and Context*

The Belgrade - Paynesville Line Rebuild project will rebuild an approximately 10.7 mile segment of transmission line of the Company's Line 0752. Line 0752 is a 19.7 mile transmission line originally built in 1940, and the Company has no record of the line being rebuilt. It is a 69 kV transmission line in west-central Minnesota between Belgrade and Paynesville, MN. This line is important because it serves the Company's as well as other utilities' distribution loads in the area.

Like the Avon – Albany project, this project was initially identified as part of the Company's systematic Major Line Rebuild program. Through the Company's Line Prioritization Matrix, the Company identified Line 0752 as being a poor performer due to its age and condition. Many of the poles are past their useful life and over the years, many have been replaced through the Storm and Emergency program due to their poor condition. Continuing to replace singular structures is no longer an option due to the number of structures requiring replacement now.

## **3. Canisota Junction – Salem Line Rebuild**

### *Project Description and Context*

The Canisota Junction - Salem Line Rebuild project will rebuild an approximately 14.9 mile segment of transmission line of the Company's Line 0779. Line 0779 was originally built in 1906, and the Company has no record of the line being rebuilt. It is a 69 kV transmission line in eastern South Dakota. This line is important because it serves the Company's as well as other utilities' distribution loads in the area.

Like the Avon – Albany and the Belgrade – Paynesville projects, this project was initially identified as part of the Company's systematic Major Line Rebuild program. Through the Company's Line Prioritization Matrix, the Company identified Line 0779 as being a poor performer due to its age and condition. Many of the poles are past their useful life and over the years, many have been replaced through the Storm and Emergency program due to their poor condition. Continuing to replace singular structures is no longer an option due to the number of structures requiring replacement now.

#### 4. CEN LCO 69 kV Line Rebuild

##### *Project Description and Context*

The CEN LCO 69kV Line Rebuild project will rebuild an approximately 13.8 mile segment of transmission line of the Company's Line 0729 between structures 1001 and 1317. Line 0729 was originally built in 1923, and the Company has no record of the line being rebuilt. It is a 69 kV transmission line in eastern South Dakota between Sioux Falls and Lennox, SD. This line is important because it serves the Company's as well as other utilities' distribution loads in the area.

Like the Avon – Albany, the Belgrade – Paynesville, and the Canisota Junction – Salem projects, this project was initially identified as part of the Company's systematic Major Line Rebuild program. Through the Company's Line Prioritization Matrix, the Company identified Line 0729 as being a poor performer due to its age and condition. Many of the poles are past their useful life and over the years, many have been replaced through the Storm and Emergency program due to their poor condition. Continuing to replace singular structures is no longer an option due to the number of structures requiring replacement now.

#### 5. Long Lake – Baytown

##### *Project Description and Context*

The Long Lake – Baytown project will string new 795 ACSS conductor on the open portion (the southern side of structures where there is currently no conductor) of the Baytown – Long Lake 115 kV line #0801 utilizing existing double circuit-capable structures. This project is located on the eastern side of the Twin Cities metro area in Minnesota (Baytown Sub – Stillwater, MN and Long Lake Sub – St. Paul, MN). It will require construction of several new structures in order to terminate into the substations (Baytown and Long Lake) because some of the existing structures are not designed to handle the structural load for the new conductor/circuit configuration. Following the installation and energization of the new 795 ACSS conductor on the southern side of the structures, the existing 795 ACSR conductor on the north side will be removed. The project will also install new OPGW (fiber optic shield wire) on the approximately seven-mile segment of the project.

NERC requires utilities to perform annual assessments of their transmission system for the 10-year planning horizon. The Company performs this annual assessment by participating in the Transmission Assessment and Compliance Team (TACT), which is a group of transmission-owning utilities in Minnesota and surrounding states.

NERC requires utilities to demonstrate plans to keep the transmission system within specified voltage, thermal, and stability limits throughout the 10-year planning period. TACT participants work together to analyze the transmission system for deficiencies (high voltage, low voltage, lines or transformers beyond their rated capability, etc.) and to ensure compliance with NERC Standard TPL 001.4. The TACT studies the performance of the system using 1-year, 5-year, and 10-year future models. When deficiencies are identified, TACT creates a plan to manage the transmission system to stay within the specified limits.

The Long Lake – Baytown project is needed because the MNTAC planning study shows that, for summer peak conditions, loss of the King 345/115 kV transformer and the Red Rock – Afton 115 kV line would result in a thermal overload, on the existing 795 ACSR conductor, of the approximately seven-mile segment of the Long Lake – Baytown 115 kV line #0801.