

OTTER TAIL POWER COMPANY
Docket No: EL14-090

Response to: South Dakota Public Utilities Commission
Analyst: SDPUC Staff
Date Received: 12/10/2014
Date Due: 12/30/2014
Date of Response: 12/30/2014
Responding Witness: Stuart Tommerdahl, Manager Regulatory Administration, 218 739-8279

Information Request:

Provide a list of the NERC compliance projects, including a brief description of each project, the reliability concerns relating to each project, and the associated costs.

Attachments: 0

Response:

Otter Tail's NERC Compliance project has entailed determining what lines may have National Electric Safety Code ("NESC") clearance violations, which could affect the reliability of Otter Tail's electric system, and the work associated with bringing those lines back into compliance. Clearance violations may involve clearances between lines and the ground, bodies of water, vegetation, or other buildings/structures. While lines may have been originally constructed in compliance with NERC standards, over time, changes in the environment near the lines can cause clearances to diminish. As noted earlier, reduced clearances increase the risk of potential line contacts that could impact the reliability of the electric system. The overall NERC compliance project has consisted of data collection, engineering assessment, and engineering and construction mitigation.

The NERC Compliance work falls into three separate project categories listed below.

1. Assessment of facilities -- This project involves the assessment of Otter Tail's transmission lines through data collection using Light Detection and Ranging ("LiDAR") technology, and engineering analysis. Otter Tail conducted line surveys using airborne LiDAR technology to gather field data on all of Otter Tail's 115kV and 230kV lines. This data, incorporated into a geographical information system ("GIS"), was used to locate and identify line clearance issues that would require further assessment and ultimately mitigation. The total costs for this phase of the project will be approximately \$1.8 million.

2. Medium Priority Facilities (230kV Facilities) – The work required here includes 479 miles of 230kV line. Otter Tail is implementing the mitigation measures necessary to be in compliance

with the NESC given its current facilities rating requirements. The work on these facilities includes modifying, moving or replacing line guys, replacement of structures, and raising structures. The current estimate of cost at completion of the Medium Priority Facilities work is \$5.8 million.

3. Low Priority Facilities (115kV Facilities) – The work required in this portion includes 522 miles of 115kV line. Otter Tail is implementing the mitigation measures necessary to be in compliance with the NESC given its current facilities rating requirements. The work on these facilities includes modifying, moving or replacing line guys, replacement of structures, and raising structures. The current estimate of cost at completion of the Low Priority Facilities work is \$8.5 million.

Project Phase	Project Description	Estimated Cost to Complete
Part 1	Assessment of Facilities	\$1.8 Million
Part 2	Medium Priority (230kV) Facilities	\$5.8 Million
Part 3	Low Priority (115kV) Facilities	\$8.5 Million
Total Current Cost Estimate		\$16.1 Million

Data collection and mitigation planning are still ongoing. The cost estimates associated with the NERC project have changed since the Initial Filing in this Docket in October 2014. The expected project costs are now \$16.1 million (they were \$15.6 million as of the Initial Filing.) The overall impact of the changes to the South Dakota Revenue Requirement is immaterial. Otter Tail recommends including the cost updates in its 2015 annual update unless a Supplemental Filing in January 2015 is necessary in this Docket in which case the update costs would be included with the Supplemental Filing.