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R-Project 345,000 volt



# Transmission Line PROJECT

## NPPD determines substation location

The R-Project is a 345,000 volt transmission project that will begin at NPPD's Gerald Gentleman Station near Sutherland and run north. It was recently determined through the line routing and substation siting process that the line will connect to a new substation to be sited near NPPD's existing substation east of Thedford. The new line will then connect to a second substation to be sited near the existing Western Area Power Administration 345,000 volt transmission line in the Holt/Antelope/Wheeler County area.

Last year, NPPD narrowed the study area for the R-Project down to corridors and those corridors were shared with the public in September. Since then, NPPD personnel have been reviewing landowner feedback and taking their comments into consideration as they work to determine possible line routes for the project. At approximately 220 miles, the R-Project is the largest transmission line project NPPD has undertaken for decades.

"In order to find the best possible line route options with the least impact to landowners, we also need to have a good idea of where our substations may be located," said Senior Project Manager Craig Holthe.

Consequently, discussions were held between NPPD and its Regional Transmission Organization, the Southwest Power Pool. Together, the entities determined that for reliability and future load growth for the north central region of the state, the

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Craig Holthe  
Senior Project Manager

R-Project 345,000 volt transmission line needs to connect to the existing 115,000 volt transmission system in the Thedford area. Further study indicated that a future connection at the existing Thedford substation would be the most feasible connection to provide the greatest benefits to all Nebraskans.

From the Thedford substation, NPPD will route a line east to a second substation to be built at a location yet to be determined in the Holt/Antelope/Wheeler County area where it will connect to an existing 345,000 volt Western Area Power Administration (WAPA) line. This substation location must meet the needs of both NPPD and WAPA while also minimizing the overall project impact.

NPPD continues to work on preferred and alternative line routes for the R-Project and is tentatively planning a third round of open houses for public input in the late April/early May timeframe. Open house invitations will be sent to affected landowners after dates, locations and times are finalized.

The R-Project will help enhance operation of NPPD's electric transmission system, relieve congestion from existing lines within the transmission system and provide additional opportunities for development of renewable energy projects.

# Questions & Answers

**Q** Where is NPPD in the line routing process?

**A** Now that Thedford has been selected as a substation location, NPPD is working to determine routes that will have the least impact on landowners. A preferred route and at least one alternative route will be shared at the third round of open houses which are tentatively scheduled for the late April/early May timeframe. There, NPPD will seek additional landowner feedback. Landowner feedback is welcome throughout the entire process.

**Q** Why not build the R-Project transmission line underground?

**A** Even though the technology exists to build a 345,000 volt line underground, NPPD does not currently have the infrastructure in place to support or maintain buried 345,000 volt transmission lines. Also, the cost is approximately 15 times more expensive to build an underground transmission line versus an overhead transmission line. Underground lines can be less reliable than overhead lines and, if there is a failure, the time to repair is much longer. Land restoration associated with burying a transmission line can be quite extensive, especially in sensitive areas.

**Q** What will you do to restore the Sand Hills after line construction?

**A** One of NPPD's goals throughout the transmission line siting and routing process is to minimize impacts of the project to landowners' property. Where damages occur that need to be repaired, we will seek landowner input on their respective restoration experiences and will continue to consult with a variety of agencies who have restoration experts on staff. NPPD is currently studying which structure types would work best in the Sand Hills. Before making any decisions, we will consider the impacts of the various structure types on the Sand Hills. During planning, we will also study the impacts of alternative construction methods. After line construction, it is one of our priorities to restore the Sand Hills to as close to their original state as possible. To do so will require NPPD and landowners to work together closely.



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**The R-Project 345 kV Transmission Line Newsletter** is published by NPPD's R-Project project team. It is intended to provide a project overview and communicate project developments.

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