

R-Project Update
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Nebraska Public Power District



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10th Annual Nebraska Wind & Solar Conference

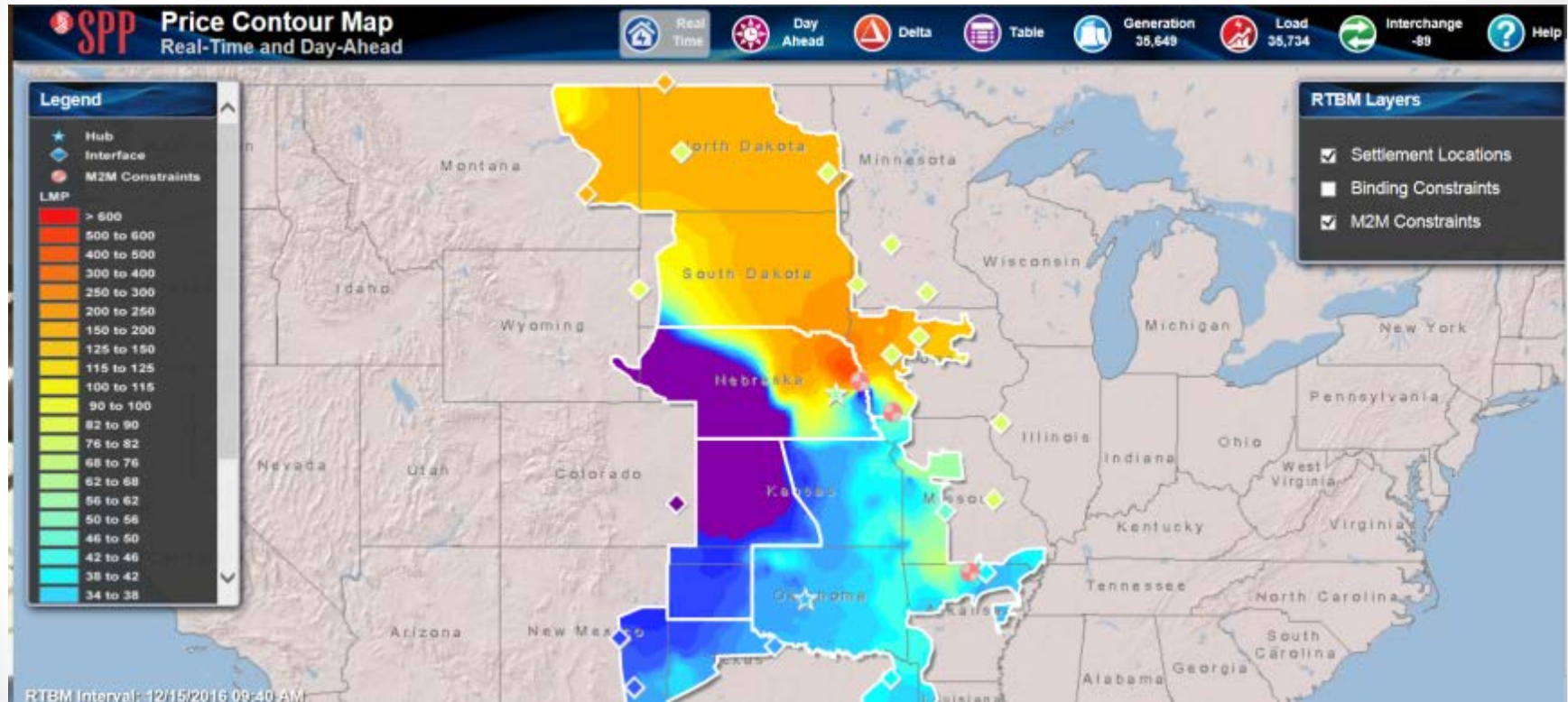
R-Project – Where We’ve Been

- R-Project is a 225 mile, 345 kV transmission line proposed from NPPD’s Gerald Gentleman Station near Sutherland to Thedford to Holt County
- Project was approved by the Southwest Power Pool (SPP) in 2012
- The public involvement process, conducted from January 2013 to January 2015, included 20 public meetings and open houses and 8 public hearings, resulting in over 1,700 meeting attendees and approximately 2,500 public comments



PROJECT PURPOSE AND NEED

What does “congestion look like”?



SPP Real-time Balancing Market – 12/15/2016 @ 0940



SPP Southwest Power Pool

**HPILS
Nebraska**
(March 2014)

- 115 kV
- 138 kV
- 161 kV
- 230 kV
- 345 kV
- CREZ 345 kV
- New Line NTC
- Reconstruct/Conversion NTC
- New Line Non-NTC
- Reconstruct/Conversion Non-NTC
- ITP Transformer
- HPILS Transformer



Theford 345/115 kV Project

- New Theford 345 kV Substation and new Theford 345/115 kV 417 MVA Transformer
- Ties into existing Theford 115 kV Substation to provide a new high capacity feed on the west side of Zone 5
- Theford project is needed to address thermal overloads and voltage violations during contingency events in Zone 5
- Theford plan focused on maximizing the reliability benefits of the R-Project facility additions

Why Thedford?

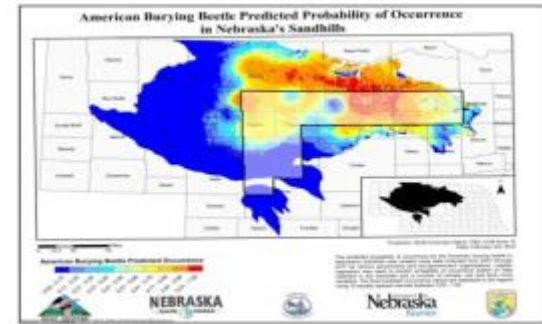
- The planning focus was to develop a new high capacity feed on the western side of Zone 5 to improve reliability for load delivery service
- Thedford is the midpoint of the 115 kV line between Ainsworth-Maxwell (58 miles to Ainsworth and 59 miles to Maxwell)
 - During contingency events in Zone 5, this new interconnection can effectively supply power to both the northern (Ainsworth-O'Neill) and southern (Callaway-Spalding) legs of Zone 5
- The Thedford substation also provides a better location for reactive compensation and voltage control on the 225-mile R-Project 345 kV transmission line

R-Project Need and Benefit

- R-Project is needed to improve the reliability of the Nebraska transmission system
- R-Project is needed to reduce congestion on the existing Nebraska transmission system to allow for more efficient operation
- R-Project is needed to provide new transmission capacity to enable future renewable generation interconnection and delivery service

R-Project Environmental Impact Statement (EIS)

- NPPD has applied for an Incidental Take Permit under the Endangered Species Act (ESA)
- When issued, the permit would authorize the take of the federally endangered American Burying Beetle incidental to the construction and anticipated emergency repairs of the transmission line
- U.S. Fish & Wildlife Service (USFWS) is responsible for completion of the Environmental Impact Statement (EIS)
 - NPPD is responsible for providing project specific information as necessary to USFWS



Permit Issuance Criteria

- The USFWS must issue a permit when the criteria contained in the ESA and the implementing regulations of the ESA are met⁽¹⁾:
 - The taking will be incidental.
 - The applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking.
 - The applicant will ensure that adequate funding for the conservation plan and procedures to deal with unforeseen circumstances will be provided.
 - The taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild.
 - Other measures and assurances, as required by the Secretary of the Interior, will be met.

⁽¹⁾ 16 U.S.C. § 1539(a)(1)(B); 50 C.F.R. § 17.22(b)(2)

R-Project Environmental Impact Statement (EIS)

- Notice of availability of the draft EIS was published in the Federal Register on May 12, 2017, and USFWS accepted public comments on the draft EIS, draft Habitat Conservation Plan, draft Migratory Bird Conservation Plan, and draft Restoration Management Plan through July 11, 2017
- Per the request of the public, a second public comment period was granted (September 8, 2017 -November 7, 2017)
- USFWS held three public meetings on June 12, 13 & 14, 2017, to share information and allow the public to provide verbal and written comments
 - USFWS held a public Q&A session on October 25th

Current Activities

- NPPD began easement acquisition in December 2015
 - Easement packages released for acquisition – 630 of 630 (100%)
 - Easements acquired – 397 of 630 (63%)
 - 129 of 180 (72%) landowners have signed easements
 - 129.5 of 225 miles of right-of-way acquired (58%)
 - Continue to work with landowners on minor line route adjustments on their property
- Conduct additional environmental surveys



Upcoming Activities

- **Construction contract to be advertised in November**
 - Anticipate awarding the contract in May
 - Construction will begin when the Incidental Take Permit is issued
- **NPPD will work with USFWS to address comments received on the Habitat Conservation Plan and other documents prepared by NPPD in support of the Incidental Take Permit and the Environmental Impact Statement**

Construction Methods (Structure Type)

- **Lattice Towers**
 - Used in areas where little to no established access currently exists
 - Used in areas where non-conventional (helicopter) construction may be necessary
 - Preferred for maintenance simplicity and smaller equipment requirements



Construction Methods (Structure Type)

- **Tubular Steel Monopole**
 - Used in areas with good or existing access
 - Used in areas where terrain allows for conventional construction techniques

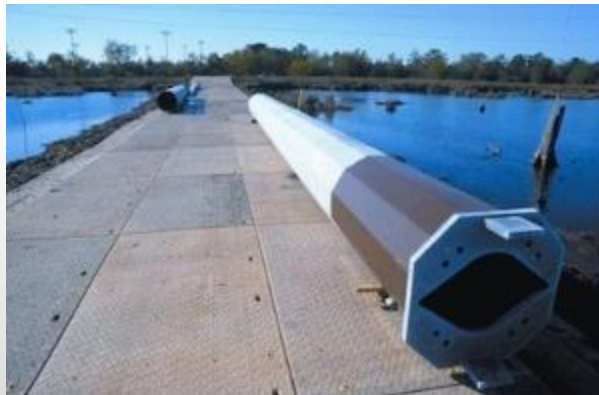


Construction Methods (Low Ground Pressure Equipment)

- Good mobility
- Vehicle weight distributed over a larger area (less ground pressure)
- Has been used by NPPD maintenance personnel



Construction Methods (Environmental Matting)



Approach to Restoration

- **Avoid and Minimize Damage**
 - Structure placement
 - Construction practices
 - Off right-of-way access
- **Mitigation**
 - Stabilization
 - Vegetative Cover
 - Periods of Varying Dominant Plant Communities
 - Native Plant Community Returns
- **Input from Stakeholders**
 - Landowners
 - Sandhills Experts (Dr. Stubbendieck, Restoration Contractors)
 - Local Agencies (UNL, NRCS, NRD, NDOR)

UNL = University of Nebraska-Lincoln

NRCS = Natural Resources Conservation Service

NRD = Natural Resource District

NDOR = Nebraska Department of Roads

Approach to Restoration



Thedford-Ainsworth Line – Sept 2013



Thedford-Ainsworth Line – Oct 2016



Maxwell-Thedford Line – Sept 2014



Maxwell-Thedford Line – Oct 2017

Opponents becoming more vocal

- Newspaper “Letters to the Editor”
- Requesting meetings with NPPD’s Board members
- Attended a legislative hearing regarding public power and provided extensive comments on wind development and on the R-Project
- Controversy over scheduled meetings with landowners and the USFWS

Opponents becoming more vocal

- Extensive social media occurring on Facebook
 - Concern that the R-Project will open the door for wind energy development in the Sandhills
-

Even if no renewable resources are ever developed, the R-Project is needed and will be constructed to improve the reliability of the transmission system in Nebraska.

What is NPPD doing?

- Held community conversation meetings with landowners along the line route to answer questions and correct information
- In process of hiring a restoration coordinator
- Targeted campaign to continue to share the facts and tell our story
- Responding to social media when appropriate
- Meetings with stakeholders

What opponents are saying

- **Damage to the Sandhills is unrepairable**

Fact

- NPPD has constructed, operated, and maintained transmission lines (approx. 500 miles) in the Sandhills for many years
- NPPD is committed minimizing damages to begin with and to ensuring that any damages are repaired
- Restoration takes time

What opponents are saying

- **NPPD is taking the land from its owners**

Fact

- NPPD seeks easements to construct, operate, and maintain lines
- NPPD will compensate landowners for an easement and pay a structure fee
- Landowners maintain use of the property
- NPPD is responsible for repairing the damage
 - During original construction or future maintenance activities

What opponents are saying

- **NPPD will need material laydown yards and fly yards every 20 miles**

Fact

- NPPD will have five material laydown yards approximately 50 miles apart.
- Fly yards will be needed to build the lattice towers (approximately 110 miles of the project). The fly yards will be approximately 7 to 10 miles apart.

What opponents are saying

- **The R-Project transmission line was planned for the Cherry County Wind Association**

Fact

- The line is being built for reliability, relief of congestion, and the potential for renewable energy development should the local area want that
- The line is not being built to meet the needs of any specific wind developers
- To-date only one wind project has been identified that is proposed to interconnect with R-Project facilities.

What opponents are saying

- **The line could have been placed further south, starting at Stapleton on an abandoned line**

Fact

- The project has to interconnect at Thedford to a new transformer that will link to the underlying 115 kV system
- This is a key piece of the reliability benefit

What opponents are saying

- **NPPD's meeting notes from five years ago say the “chief purpose” of the project is for wind energy.**

Fact

- NPPD has always discussed the need for the project in three parts; 1) improve reliability, 2) reduce congestion, and 3) enable development of renewable resources should the local area want that
- NPPD has always disagreed with the initial SPP characterization that the “chief purpose” of the project was for wind energy.
 - SPP formally changed their characterization of the project at their July 2014 Board meeting.

Even if no renewable resources are ever developed, the R-Project is needed and will be constructed to improve the reliability of the transmission system in Nebraska.

