



**Luverne Wind Farm
Substation Construction
Plan of the Week (POW)**

Week of July 27th-31st, 2009

Otter Tail Power Company

Activities:

- **Activities this week:** Crews installed the 34.5kv bus, outdoor pt boxes and worked on the 34.5kv bus and breaker jumpers. Installed the outdoor trenwa. Installed the 230kV metering CT/PTs and OPGW splice box. Began the indoor control house relay panel wiring and terminations.
- **Activities next week:** Install outdoor control cable and terminate. Install the 230kv Breaker and 230kV jumpers. Install the fiber from the OPGW splice box to the control houses at both Luverne and Pillsbury.
- **Safety/Environmental:**
Disturbed soils are showing good re-growth from the seedings.
- **Lay down Yard:**
None.
- **Electrical/Construction:**
Working with Minnkota on the communications needs at the Maple River substation for the secondary SPS path.
- **Potential Schedule Delays:**
None.

General Information and Announcements

Construction	% Complete
Luverne Substation	
Sub Grade Yard and Road	100%
Final Grading Yard and Road-Class V	100%
Concrete Foundations	100%
Install Ground Grid	100%
Install Steel	100%
230 & 35kV bus / Outdoor Welding Conduit	75%
Complete Outdoor Equipment Installation, etc.	65%
Install Fence	100%
Construct Control House	100%
Install Control House Equipment & Wiring	100%
Install Control House Relay Panels and Wiring	60%
Install Yard Rock	0%
Testing & Commissioning	0%

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 Luverne Wind, Substation, Construction Activities
 Report - July 27 - 31, 2009

Material Delivery	Required	Rec'd
Luverne Substation		
High Voltage 230kV Circuit Breaker at Barnes Substation	1	
High Voltage 230/34.5kV Transformer-HiCO	1	
Metering CT/PT Combo, 230kV	3	
Three phase 35kV group-operated Switch, 4000 amp	1	1
SF6 Circuit Breaker, 69kV	9	9
Three phase 230kV group-operated Switch, 2000 amp	1	1
Single Phase hookstick Disconnect Switch, 35kV, 1200 amps	48	48
Reactor, Neutral Grounding, 34.5kV	1	
Potential Transformer, 35kV, Single Bushing	11	8
Station Class Surge Arrester Polymer Type 152 MCOV	3	3
230kV Station Post Insulator	3	3
35kV Station Post Insulator, TR-231	18	18
35kV Station Post Insulator, TR-210	84	84
Outdoor Control Cable (4 & 12 Conductor #10)	Lot	100%
Aluminum Bus Tubing and Welded Connectors	Lot	100%
Steel Structures (230 & 35kv Bays)	Lot	100%