



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

Week of July 20th-24th, 2009

Otter Tail Power Company

Activities:

- **Activities this week:** Crews completed the substation yard fence and signage. Substation wall equipment and tray cable was installed. T-Line was terminated into the deadend Friday. Ground transformer bases were installed this week and above grading grounding and bus welding continued. Static poles were also installed and anchored.
- **Activities next week:** Install Control house relay panels and wiring. Work on over welded bus and install breakers, conduit and work on jumpers. Looking ahead the week of Aug 3rd, testing crews will arrive and breakers will have SF6 installed. Trenwa and outdoor wiring will start.
- **Safety/Environmental:**
None.
- **Lay down Yard:**
None.
- **Electrical/Construction:**
None.
- **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	20%
Complete Outdoor Equipment Installation, etc.	30%
Install Fence	100%
Construct Control House	100%
Install Control House Equipment & Wiring	100%
Install Control House Relay Panels and Wiring	0%
Install Yard Rock	0%
Testing & Commissioning	0%

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Otter Tail Corporation

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%