



## BORDER WINDS ENERGY PROJECT

### WEEKLY PROJECT REPORT

Weekly report no:	26
Report for week period ending COB Friday:	01/23/15
Calendar week no:	4

### Executive Summary

#### This Week's Highlights

- Completed the steel erection at the O&M Building on January 22, 2015
- Held weekly conference call with RES and REI to discuss the cold weather concreting plan for the substation foundation.
- Held weekly conference call with RES and REI to discuss schedule of drawings to be received and reviewed in preparation for design review meeting in Minneapolis being planned for February;
- Received cable for a total 12 reels equaling 40,475 LF over the week;
- Started installation of yard lighting on January 20<sup>th</sup>. Schedule to complete on Tuesday January 27, 2015.

#### This Week's Key Issues

- Downed power lines still remain on-site and repairs are on-going, utilities to fix the lines the week of January 26, 2015;
- Based on engineering recommendation, the anchor bolts and anchor bolt cages will not require greasing and will be cleaned, greased and capped during the turbine erection phase.
- Reviewing construction schedules based upon current status and required completion dates – updating overall project schedule.
- Signage on the county roads damaged due to snow and wind to be reinstalled.



## Safety

\*Full description of week's Safety Log can be found in Exhibit 2

Type	Lost Time	Recordable Injury (Medical Aid)	Minor Injury (First Aid)	Equipment Property Damage	Near Miss	3X20 Observation
Current Period	0	0	0	0	0	6
Project To Date	1	0	9	19	65	419

**Previous Week TRIR = 1.44    Current week TRIR = 1.43**

((Lost Time + Medical Aid) \* 200,000) / Total Man Hours

**RES Safety Index = 0.97**

((Lost Time \* 64) + (Injury \* 16) + (Minor Injury \* 4) + (Damage \* 1) + (Near Miss \* 0.25)) / Man Hours \* 1000

### Weeks Highlights:

- Site Safety Supervisor Macias recognized with the Safety Leadership Recognition Award for his participation in the O&M building safety oversight;
- To ensure a safe working site we have been doing snow removal around work trailers and throughout the site;
- RES Safety oversight of the AB Systems O&M project has continued and PCS participation in the safety program has exceeded expectations.

### Weeks Issues:

- Radio traffic on the site had been deteriorating, Stones Mobile Radio scheduled for the week of the 30<sup>th</sup> to repair and reprogram radios.

### Project Work Hours:

- Weekly Man-hours: 1064.00
- PTD Man-hours: 139,175.20



### Environmental

\*Full description of week's Environmental Report can be found in Exhibit 2

Type	Major Incident	Minor Incident	Near Miss	Observation
Current Period	0	0	0	1
Project to Date	0	46	3	17

#### Rolling Incident Score

Previous week: 0.89 Current Week: 0.86

#### Week's Highlights:

- Temperature slightly above freezing on January 22-23, 2015. Observed snow thaw with no significant runoff.

### Quality

\*Full description of week's Quality Report can be found in Exhibit 4

	NCRs			Incidents			CPARs		
	Issued	Open	Closed	Issued	Open	Closed	Issued	Open	Closed
Weekly	0	0	0	0	0	0	0	0	0
Total	8	2	6	0	0	0	0	0	0

#### Week's Highlights:

- On-going – Working on job books.
- Submitted the Construction inspection and test plan to Xcel.

#### Work Area Inspections:

- Inspections of the O&M Building steel frame erection.
- Bolt inspections on the steel frame will be done on Wednesday January 28, 2015.



## Schedule Status

Project duration	69
No. of weeks into contract	28
Contract time passed (%)	41%

Key Activities (Construction)	Weighted %	Percent Complete		
		Contract Schedule	Construction Schedule	Actual
Design Engineering	2.5%	100%	100%	100%
Roads	14%	100%	83%	83%
Crane Pads	6%	0%	0%	0%
Foundations	20%	100%	95%	95%
Collection System	20%	46%	29%	29%
Substation	10%	55%	16%	16%
WTG Delivery, Erection, MCC	20%	0%	0%	0%
O&M Building	5%	100%	28%	28%
Completion	2.5%	0%	0%	0%
Overall Actual Percent Complete				41%

## Progress Report

### Permit Status

Permit Type / Description	County / State	Responsible Group	Date Needed By	Status
O&M Well Permit	ND State	AB Systems	8/30/15	Pending submittal

- Sent an RFI and cost information (based on RES investigation) to AB systems regarding the potable water options.

### Construction Status

Certificates	Total	Submitted	Signed
Foundation Completion Certificate	75	0	0
Mechanical Completion Certificate	75	0	0
Electrical Works Completion Certificate	1	0	0
Project Mechanical Completion Certificate	1	0	0
Project Substantial Completion Certificate	1	0	0
Project Final Completion	1	0	0



**ROADS & CRANE PADS**

Item	Weighted %	Budget	Total Completed	Total Remaining	Percent Complete
Roads	70%	Roads			69%
Clear and Grub	20%	152,837	152,837	0	100%
Subgrade	25%	152,837	141,346	11,491	92%
Place and Compact Road Base	30%	207,469	185,555	21,914	89%
Shoulders	15%	152,837	0	152,837	0%
Ditches	10%	152,837	0	152,837	0%
Crane Pads	30%	Crane Pads			0%
Shape and Compact Sub Grade	40%	75	0	75	0%
Place and Compact Road Base	60%	75	0	75	0%

**Comments:**

- Construction of new roads is on hold due to frozen subgrade conditions;
- Completed staging Class 5 aggregate for construction of crane pads at first 28 turbine sites in erection sequence.

**FOUNDATIONS**

Item	Weighted %	Budget	Total Completed	Total Remaining	Percent Complete
Excavations	10%	75	71	4	95%
Mud Mats	5%	75	71	4	95%
Bases	45%	75	71	4	95%
Pedestals	20%	75	71	4	95%
Backfilled	15%	75	71	4	95%
Vestas Ground Kit	5%	75	71	4	95%

**Foundation Progress 95%**



**Comments:**

- As recommended by engineering, the anchor bolt cages will not require short term protection but will be cleaned, greased and capped during the turbine erection stage.

**COLLECTION SYSTEM**

Item	Weighted %	Quantity	Total Received	Total Remaining	Percent Complete
<b>Deliveries</b>		<b>30.0%</b>	<b>Deliveries</b>		<b>82%</b>
Grounding Transformers	10.0%	6	0	6	0.0%
MV Cable 3/0 AWG AL	15.0%	308,288	314,910	0	100%
MV Cable 350 Kcmil AL	7.5%	140,708	139,656	1,052	99%
MV Cable 750 Kcmil AL	15.0%	217,740	173,498	44,242	80%
MV Cable 1000 Kcmil AL	7.5%	88,167	90,485	0	100%
MV Cable 1250 Kcmil AL	20.0%	147,069	150,472	0	100%
Fiber 12 count	2.5%	328,520	336,590	0	100%
Fiber 120 count	2.5%	6,587	0	6,587	0%
Ground Cable	10.0%	299,663	299,663	0	100%
Junction Boxes	5.0%	28	28	0	100%
Rubber Goods	5.0%	1420	772	648	54%
<b>Installations</b>		<b>50.0%</b>	<b>Installations</b>		<b>9%</b>
Trench	60%	278,230	24,611	253,619	8%
MV & Fiber/Ground Cable	30%	297,841	31,052	266,789	10%
Grounding Transformers	5%	6	0	6	0.0%
Junction Boxes	5%	28	0	28	0.0%
<b>Terminations</b>		<b>20.0%</b>	<b>Terminations</b>		<b>0.0%</b>
Grounding Transformers	10.0%	6	0	6	0.0%
Junction Boxes	30.0%	28	0	28	0.0%
Turbines	60.0%	75	0	75	0.0%

**Collection System Progress: 29%**

**Comments:**

- Continuing to work with Procurement and ABB to receive final grounding transformer drawings;
- Received cable deliveries. Expected to complete cable deliveries by the end of January.
- Xcel has approved the Fiber vaults, and purchased by RES.
- Ground grid tester selected and information sent to initiate contract.
- Received cable for a total 12 reels equaling 40,475 LF over the week;
- Contacted Northern Plains Electric to discuss line drops for the crane walk.
- Reviewed the collection line movements with Xcel. Will submit for official Xcel approval after discussing with land owners.



- Steel junction boxes were approved and purchased. Lead time is 8 to 9 weeks. Should be acceptable for trench operations.

**O&M BUILDING**

Activity Description	Required	Unit	To Date Total	Remains	% Comp.
Earthworks	100	%	85	15	85%
Foundation	100	%	85	15	85%
Deliver Building	100	%	100	0	100%
Building Enclosed	100	%	60	40	60%
Building Interior Framing	100	%	0	100	0%
Building Electrical	100	%	0	100	0%
Building HVAC	100	%	0	100	0%
Plumbing	100	%	0	100	0%
Building Interior Trim & Finishing	100	%	0	100	0%
Septic System	100	%	0	100	0%
Water Well	100	%	0	100	0%
Fence and Yard Rock	100	%	0	100	0%

**O&M Building Progress: 28%**

**Comments:**

- Completed the steel erection at the O&M building on January 21, 2015.
- Ongoing installation of secondary frames, windows.
- Received final drawing set from AB Systems for review and comments. Drawings will be submitted to Xcel after receiving additional drawings requested.
- Will review with AB system the new 3 week look-ahead schedule (based on the weather forecast) on Monday, January 26, 2015.
- AB Systems has provided a full construction schedule which was reviewed on-site and returned with comments;
- RES safety has a safety supervisor fully assigned to support PCS's erection work.



**Substation**

Item	Weighted	Required	Total Completed	Total Remaining	Percent Complete
<b>Design</b>	<b>20%</b>	<b>Design</b>			
Design Drawings	20%	100	70	30	70.0%
<b>Deliveries</b>	<b>35%</b>	<b>Deliveries</b>			
Structural Steel	5%	100	0	100	0.0%
Main Transformer	15%	100	0	100	0.0%
Control House	5%	100	0	100	0.0%
Relay Panel	2.5%	100	0	100	0.0%
Arrestors	2.5%	100	0	100	0.0%
Switches	2.5%	100	0	100	0.0%
Breakers	2.5%	100	0	100	0.0%
<b>Construction</b>	<b>45%</b>	<b>Construction</b>			
Grading & Drainage	5%	100	75	25	75.0%
Foundations	10%	100	0	100	0.0%
Underground/Grounding	5%	100	0	100	0.0%
Structural Steel Work	5%	100	0	100	0.0%
Equipment Installation	5%	100	0	100	0.0%
Control Building/Wiring	5%	100	0	100	0.0%
Transformer Fit Out	5%	100	0	100	0.0%
Commission	5%	100	0	100	0.0%
Fence, Gravel, & Clean Up	2.5%	100	0	100	0.0%

**Substation Progress: 16%**

**Comments:**

- Received equipment submittal information from REI, reviewed internally, and transmitted to Xcel and REI with comments;
- Held a conference call with RES and REI to review the cold weather concreting plan. Waiting on Discussed the schedule of drawings to be received and reviewed in preparation for design review meeting in Minneapolis being planned for February.
- Held weekly conference call with RES and REI to discuss schedule of 60% drawings to be received and reviewed in preparation for design review meeting in Minneapolis planned for February 5<sup>th</sup>.
- Rosendin planning to mobilize to site on 2<sup>nd</sup> February, 2015.

**Exhibit 1 – Site Photographs**





Steel Erection at O&M Building





Yard lighting – pole installation



Yard lighting – Installation



Laydown yard





## Exhibit 2 – Safety Log

#	DATE:	INCIDENT OBSERVED DURING:	INCIDENT TYPE:	COMPANY INVOLVED:	INCIDENT DETAILS:	CORRECTIVE ACTION DETAILS:	ACTIONS TAKEN TO PREVENT REOCCURRENCE:
354	1/19/2015	Normal Work Activities	Hazard Observation	RES	After a winter storm in the area a stop sign was knocked down that leads off site and to the main highway.	The Rolette County Sheriffs office was made aware of the downed sign and a county work order was placed to fix the sign.	The individual that found the sign down made everyone aware of the downed stop sign and where it was.
355	1/19/2015	Safety Walk	Safe Work Observation	PCS	All personnel working at height had on fall arrest systems.	None, this was a Safe Observation.	None, this was a Safe Observation.
356	1/19/2015	Safety Walk	Hazard Observation	PCS	T posts did not have caps on them.	Site foreman was made aware of the t-posts that did not have caps. Foreman assigned worker to cap t-posts.	Foreman was directed to add "ensure t-posts and rebar are capped" to daily JHA.
357	1/19/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 1 Job information and Setup completed. Adequate at the time of inspection.	None, this was a Safe Observation.	None, this was a Safe Observation.
358	1/19/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 2 Housekeeping and Sanitation completed. Adequate at the time of inspection.	None, this was a Safe Observation.	None, this was a Safe Observation.
359	1/19/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 3 Fire Prevention completed. Adequate at the time of inspection.	None, this was a Safe Observation.	None, this was a Safe Observation.
360	1/19/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 4 Compound Electrics completed. Adequate at the time of inspection.	None, this was a Safe Observation.	None, this was a Safe Observation.
361	1/19/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 5 Electrical Work completed. Adequate at the time of inspection.	None, this was a Safe Observation.	None, this was a Safe Observation.
362	1/19/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 6 Hand Tools completed. Adequate at the time of inspection.	None, this was a Safe Observation.	None, this was a Safe Observation.



363	1/19/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 7 Power Tools completed. Adequate at the time of inspection.	None, this was a Safe Observation.	None, this was a Safe Observation.
364	1/19/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 8 Ladders completed. Adequate at the time of inspection.	None, this was a Safe Observation.	None, this was a Safe Observation.
365	1/19/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 9 Lifting Operations. Adequate at the time of inspection. Current lifts being overseen by Site Safety Supervisor Macias, with sub-contractor PCS at O&M building.	None, this was a Safe Observation.	None, this was a Safe Observation.
366	1/19/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 10 Storage of Materials completed. Adequate at the time of inspection.	None, this was a Safe Observation.	None, this was a Safe Observation.
367	1/20/2015	Safety Walk	Safe Work Observation	PCS	Employees inspected each other's harnesses before getting onto the scissor lift.	None, this was a Safe Observation.	None, this was a Safe Observation.
368	1/20/2015	Safety Walk	Hazard Observation	PCS	Employee took a couple of steps out of the office trailer before noticing he did not have his hard hat on.	Employee was addressed as to making sure that all PPE is present before entering the jobsite.	All employees and the supervisor were addressed as to making sure that all PPE is present before entering the jobsite.
369	1/21/2015	Safety Walk	Safe Work Observation	RES Earth and Cable	Employee cleaned off the road with a maintainer and pushed all the snow into a designated and safe location.	None, this was a Safe Observation.	None, this was a Safe Observation
370	1/21/2015	Safety Walk	Safe Work Observation	PCS	Foreman made sure all shackles, nylon straps, and steel chokers were properly rated before lifting the steel.	None, this was a Safe Observation.	None, this was a Safe Observation
371	1/21/2015	Safety Walk	Safe Work Observation	PCS	Employees designated one person to give signals during the lifting process.	None, this was a Safe Observation.	None, this was a Safe Observation



### Exhibit 3 – Environmental Log

#	CLASS	SUB-CAT	CONTRACTOR	DATE	INCIDENT DETAILS	ACTION TAKEN TO CORRECT SITUATION	ACTION TAKEN TO PREVENT REOCCURANCE
23053-15-18	Observation	Weather Event	All	1/22 - 1/23/2015	Temperature slightly above freezing. Observed snow thaw. No significant runoff	Monitor for runoffs.	--



**Exhibit 4 – Quality Log**

- Incidents - None
- CPARs - None
- NCRs - 8

**Material Receipt**

Description of Material	Delivery Date	Vendor	Quantity	Cumulative Qty	Balance

Description of Material	NCR Opened (Current Week)	NCR Closed (Current Week)	Total NCR Open (As of this Week)	Total NCR Closed (As of this week)
Totals			2	6
NCR-2014-34, Topsoil beneath subgrade fill material at the Substation			X	
NCR-2014-38, T3 grounding was not installed per specifications			X	



**FIELD QUALITY CONTROL PROGRAM  
DEFICIENCY REPORT REGISTER**

No.	Description i.e. Roads, Foundations, Electrical	LOCATION	Turbine #	Test Document No:	DEFICIENCY DESCRIPTION	DATE ENTERED	DATE CLEARED
1	Roads, Culverts	Road K2 Sta. 21+00	T-28/T-29	USCF-001	Incorrect Culvert Installation	9/29/2014	11/24/2014
2	Roads, Culverts	Road W# Sta. 00+12	T-59	USCF-001	Incorrect Culvert Installation	9/29/2014	
3	Foundations	T-49 Base	T-49	USCF-002	Foundation not protected for cold weather per ACI 306	10/08/2014	11/05/2014
4	Roads, Culverts	105 <sup>th</sup> Ave Sta. 15+25		USCF-001	Geogrid not replace after installation	10/14/2014	
5	Roads, Culverts	Access Road T2	T-74	USCF-001	Road alignment incorrect, Culverts missing	9/30/2014	
6	Roads, Culverts	N1 00+00	T-45	USCF-001	Culvert installation not per specifications	11/05/2014	
7	Roads, Culverts	108 <sup>th</sup> Ave. at T-24		USCF-001	Geogrid is showing through the class 5 material	11/10/2014	
8	Roads, Culverts	Access roads to T-9, T-10, T-11, T-34, T-35 & T-71		USCF-001	Class 5 material is out of specification.	11/13/2014	
9	Roads, Culverts	Access road to T-37 Sta. 8+00	T-13	USCF-001	Geogrid is damaged	11/13/2014	
10	Roads, Culverts	Culvert at T-26	T-26	USCF-001	Needs to be extended on west end	11/23/2014	
11	Roads, Culverts	Access Road C2	T-10	USCF-001	The access road needs to be re-aligned per the land owner's request	12/03/2014	
12	Foundations	O&M Building		USCF-002	Stoop footer at S/E end of building has wrong backfill material	12/05/2014	



### Exhibit 5 – RFI Log

\*Open RFIs and RFIs closed last week

	Generated By	Company	Sent To	Company	Subject	Date Sent	Response Requested By	Type: Civil, Electrical, etc.	Status / Comments	Date Closed
23053-30	Shabeeb Abdul Khader	RES	Bradley Morrison	Xcel Energy - Generation	Install crushed aggregate on the substation site	10/31/2014	11/6/2014	Civil	Xcel Responded	
23053-35	Emad Alaydi	RES	Tim Boardman	AB Systems	O&M Foundation Protection			O&M		
23053-39	Emad Alaydi	RES	Brad Morrison	Xcel Energy - Generation	Meteorological Station	1/14/2015	1/21/2015	SCADA	Xcel responded	
23053-40	Emad Alaydi	RES	Brad Morrison	Xcel Energy - Generation	Border Winds- O&M Building Color & Finishes Selection	1/16/2015	1/22/2015	O&M	Xcel coordinating with AB system	
23053-41	Lester Archer	RES	Brad Morrison	Xcel Energy - Generation	MPT Conduit Stub Up	1/16/2015	1/23/2015	Electrical		01/22/15
23053-42	Emad Alaydi	RES	Tim Boardman	AB Systems	Potable Water - O&M	1/22/2014	1/29/2015	O&M	RES provided the requested information	
23053-43	Lester Archer	RES	Brad Morrison	Xcel Energy - Generation	Substation - Collection Riser Conduit	1/22/2015	1/30/2015	Electrical		01/23/15