



## BORDER WINDS ENERGY PROJECT

### WEEKLY PROJECT REPORT

Weekly report no:	27
Report for week period ending COB Friday:	01/30/15
Calendar week no:	5

### Executive Summary

#### This Week's Highlights

- All steel erection and secondary framing completed at O&M Building;
- 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, scheduled for February 4, 2015.
- REI submitted the 60% drawings package; RES reviewed internally and sent comments to REI. Package also submitted to Xcel for review ahead of February 4<sup>th</sup> review meeting;
- Received cable for a total seven (7) reels equaling 17,254 LF over the week;
- Laydown yard lighting installation completed.

#### This Week's Key Issues

- Downed power lines still remain on-site and repairs are on-going, utilities to fix the lines in the coming weeks;
- Reviewing construction schedules based upon current status and required completion dates – updating overall project schedule;
- Erection self-perform representatives scheduled to visit the site next week to finalize crane walk pathways;
- Signage on the county roads damaged due to snow and wind being 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	5
Project To Date	1	0	9	19	65	424

**Previous Week TRIR = 1.43    Current week TRIR = 1.42**

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

**Previous Week RES Safety Index = 0.97    Current week RES Safety Index = 0.96**

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

### Weeks Highlights:

- Stones Mobile Radios was onsite to reprogram site radios and added another repeater to the area tower for improved connectivity. A base station and several mobile radios have also been ordered and will be programed and used on site to aid in the transmissions of radio signals on site;
- A HSQE requested inventory was completed to determine what safety equipment is available on site and to correct any deficiencies;
- The site signage plan has been completed and is in process of being implemented on site.

### Weeks Issues:

- Weather onsite caused a start delay for several days at the end of the week.

### Project Work Hours:

- Weekly Man-hours: 1073.00
- PTD Man-hours: 140,770.20



### 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	18

### Rolling Incident Score

Previous week: 0.86 - Current Week: 0.84

#### Week's Highlights:

- Temperature slightly above freezing for January 2015. Observed snow thaw but 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.
- On-going – Monitoring of O&M Building construction.

#### Work Area Inspections:

- Inspections of the O&M Building steel frame erection;
- Bolt inspections on the steel frame will take place once torque wrench arrives.



## Schedule Status

Project duration	70
No. of weeks into contract	29
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

- RFI pending regarding cost information and available 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;
  - Aggregate was found to be out of specification. Supplier will provide 28 loads of clean 1-inch material for blending with the existing aggregate. This remediation has been approved by RES Engineering.

**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>85%</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	143,964	0	100%
MV Cable 750 Kcmil AL	15.0%	217,740	188,128	29,612	86%
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	6,587	6,587	100%
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>5%</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: 30%**

**Comments:**

- RES self-perform and the Project Team discussed the update to the Project Schedule, schedule of values, use of a spider plow subcontractor, and plans to speak with land owners regarding upcoming work;
- Began discussion with Procurement to begin contracts for ground grid contractor and Northern Plains Electric;
- Contacted RES Engineering regarding Rosendin's Incoming RFI 350089-15, awaiting response;
- Received drawings from ABB on grounding transformers - RES Engineering is currently reviewing before submittal to Xcel;



- Began discussion with RES Engineering regarding inside-tower grounding and miscellaneous materials needed for terminations;
- Working with WECS to complete rubber goods order.

**O&M BUILDING**

<b>Activity Description</b>	<b>Required</b>	<b>Unit</b>	<b>To Date Total</b>	<b>Remains</b>	<b>% Comp.</b>
Earthworks	100	%	85	15	85%
Foundation	100	%	85	15	85%
Deliver Building	100	%	100	0	100%
Building Enclosed	100	%	70	30	70%
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:**

- A meeting with AB Systems was held on Monday, January 26, 2015 to discuss the construction progress, schedule, drawings, and outstanding RFIs;
- All steel erection and secondary framing is complete. Wall sheeting to begin the week of February 2, 2015;
- Received the O&M drawings from AB Systems and transmitted to Xcel for review;
- Received the 3-Week Look Ahead Schedule from AB Systems - currently under review;
- Awaiting IT Installation dates from Xcel for inclusion in the master construction schedule.



**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:**

- 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 scheduled for February 4<sup>th</sup>.
- REI submitted the 60% drawings package; RES reviewed internally and sent comments to REI. Package also submitted to Xcel for review ahead of February 4<sup>th</sup> design review meeting;
- Rosendin planning to mobilize to site on February 4, 2015.

**Exhibit 1 – Site Photographs**



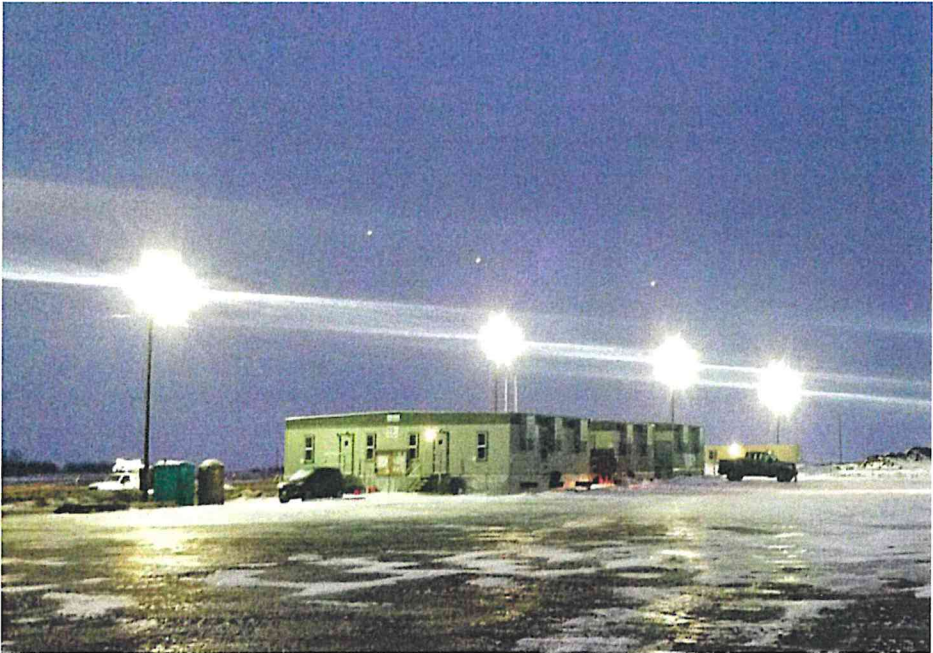
Laydown Yard Lighting Installation



O&M Building



O&M Building



Completed Laydown Yard Lighting



Restroom Shelter Build



## Exhibit 2 – Safety log

#	Date:	Incident Observed During:	Incident Type:	Company Involved:	Incident Details:	Corrective Action Details:	Actions Taken to Prevent Reoccurrence:
372	1/26/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 11 Excavation and Shoring completed. Non-Applicable Section.	None, this was a Safe Observation.	None, this was a Safe Observation.
373	1/26/2015	Safety Inspection	Hazard Observation	RES Americas	Section 12 Flammable Gases and Liquids completed.	Some compressed gases and grease held below storage temp moved into maintained trailer where temp is at 70.	Materials moved inside a warm trailer for storage.
374	1/26/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 13 Welding and Cutting completed. Adequate at the time of inspection.	None, this was a Safe Observation.	None, this was a Safe Observation.
375	1/26/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 14 Concrete Construction completed. Non-Applicable Section.	None, this was a Safe Observation.	None, this was a Safe Observation.
376	1/26/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 15 SDS completed. Adequate at the time of inspection.	None, this was a Safe Observation.	None, this was a Safe Observation.
377	1/27/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 16 PPE completed. Adequate at the time of inspection.	None, this was a Safe Observation.	None, this was a Safe Observation.
378	1/27/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 17 Work at Height completed. Adequate at the time of inspection.	None, this was a Safe Observation.	None, this was a Safe Observation.
379	1/27/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 18 Scaffolds completed. Non-Applicable Section.	None, this was a Safe Observation.	None, this was a Safe Observation.
380	1/27/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 19 First Aid completed. Adequate at the time of inspection.	None, this was a Safe Observation.	None, this was a Safe Observation.
381	1/27/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 20 Explosives and Blasting completed. Non-Applicable Section.	None, this was a Safe Observation.	None, this was a Safe Observation.
382	1/28/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 21 Vehicle Safety completed. Adequate at the time of inspection.	None, this was a Safe Observation.	None, this was a Safe Observation.
383	1/28/2015	Safety Inspection	Safe Work Observation	RES Americas	Section 22 RES Staff Training completed. Adequate at the time of inspection.	None, this was a Safe Observation.	None, this was a Safe Observation.
384	1/28/2015	Safety Walk	Hazard Observation	RES Earth and Cable	REC team members were building a port-o-toilet shack in the lay down yard to house port-o-toilets during winter conditions. Work area was located next to laydown yard entrance/ parking and foot traffic area. There were no barricades to identify the work area and prevent unauthorized entrance.	Site Safety Supervisor made all REC team members aware of the need to barricade the work area and were provided orange cones to do so. Additionally team members were directed to add barricade needs to JHA.	All team members were advised of the hazard associated with the task during the 29Jan2015 safety meeting.



385	1/28/2015	Safety Walk	Hazard Observation	RES Americas	Team members have not been carrying radios on site when they leave the office to perform work activities.	Safety Supervisor took radios that had not been taken from the docking station to the assigned team member.	All team members were reminded that they need to have radios at all times when on site.
386	1/29/2015	Safety Walk	Safe Work Observation	RES Earth and Cable	A REC team member made sure that a one time delivery driver unloading materials in the yard had correct PPE.	None, this was a Safe Observation.	None, this was a Safe Observation.
387	1/27/2015	Safety Walk	Safe Work Observation	PCS	Employees inspected each other's harnesses after the morning meeting to ensure compliance with RES Policy.	None, this was a Safe Observation.	None, this was a Safe Observation.
388	1/28/2015	Safety Walk	Safe Work Observation	PCS	All cordless tools were inspected prior to use and a few were taken out of service for repairs.	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
23053-15-19	Observation	Weather Event	All	1/27 - 1/28/2015	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; RES to test in the Spring.	
23053-35	Emad Alaydi	RES	Tim Boardman	AB Systems	O&M Foundation Protection			O&M		01/26/2015
23053-39	Emad Alaydi	RES	Brad Morrison	Xcel Energy - Generation	Meteorological Station	1/14/2015	1/21/2015	SCADA	Xcel responded	01/24/2015
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	
23053-42	Emad Alaydi	RES	Tim Boardman	AB Systems	Potable Water - O&M	1/22/2014	1/29/2015	O&M	RES provided the requested information	