

BORDER WINDS ENERGY PROJECT WEEKLY PROJECT REPORT

Weekly report no:	24
Report for week period ending COB Friday:	1/9/2015
Calendar week no:	2

Executive Summary

This Week's Highlights

- Downed powerlines under repair by Northern Plains Electric;
 - All downed lines have been de-energized;
- Snow removal (continuous activity) at laydown, O&M, and Substation areas;
- Continued organization of QA/QC documents and photos for job books;
- Conducted kick-off meeting with O&M subcontractor;
- Received grease material for foundation anchor bolts. Installation to commence upon improved weather conditions;
- Continued receipt of collector MV cable;
- Modspace on site to commence minor repairs to site office trailers;
- Transition of Julio Lima to position of Project Manager;
- Conducted December monthly review with Xcel prior to exit of Bob Tepp.

This Week's Key Issues

- Extreme weather conditions including high winds, blizzard conditions, wind chill temperatures of -35 to -42 degrees;
- Installation of yard lighting delayed one week pending improved weather conditions;
- Working with subcontractors to update construction schedules based upon current status and required completion dates – updating overall project schedule;
- Continued optimization planning of directional bores;
- Continue to monitor Rosendin progress in substation engineering.



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	1	1
Project To Date	1	0	9	19	64	408

TRIR = 1.45

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

RES Safety Index = 0.98

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

Weeks Highlights:

- Despite extreme winter weather conditions, there were no incidents, damages or injuries related to conditions;
- Team members that were onsite used situational awareness throughout the week during extreme conditions by bringing warmer attire with them if needed, calling fellow team members to let them know if they were going to be late due to weather or if assistance was needed driving in and out of the site. This indicates a genuine participation in the Border Winds Safety Program and attention to personal safety.

Weeks Issues:

- Site experienced blizzard/ white out conditions on 1/8/2015 resulting in the site closing early;
- Extreme winter and weather conditions were persistent throughout the week, team members had to clear snow build up and drifts daily;
- Outdoor work activity was limited to emergency or work essential operations to avoid chances of frost bite, hypothermia or exposure concerns.

Project Work Hours:

- Weekly Man-hours: 551
- PTD Man-hours: 137,593

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	1

Rolling incident Score

Previous week: 0.93 Current Week: 0.91

Week's Highlights:

- Frozen ground conditions.
- Temperatures remained below -30F with wind chill through most of the week. No snow thaw observed.

Week's Issues:

- Blizzard conditions on Thursday, 1/8/2015.

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 Daily Quality Meeting, the purpose of the meeting is to convey any quality construction issues between the RES quality team, RES management and Xcel team.
- On-going – organization of QA/QC reports and photos for inclusion in job books.

Work Area Inspections conducted:

- Inspected bolt cage covers for T10, T11 & T34;
- Updating I&T plan;
- Preparing 2015 construction activity inspection sheets.

Schedule Status

Project duration	68
No. of weeks into contract	26
Contract time passed (%)	38 %

Key Activities (Construction)	Weighted %	Percent Complete		
		Contract Schedule	Construction Schedule	Actual
Design Engineering	2.5%	100%	100%	100%
Roads	14%	95%	83%	83%
Crane Pads	6%	0%	0%	0%
Foundations	20%	100%	95%	95%
Collection System	20%	46%	24%	24%
Substation	10%	55%	16%	16%
WTG Delivery, Erection, MCC	20%	0%	0%	0%
O&M Building	5%	100%	21%	21%
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

Comments:

- Submitted RFI regarding the additional cost of infrastructure to allow option of municipal water in place of a well at the O&M Building – a 6,000-7,000 linear-foot water line would have to be installed at an estimated cost of \$8-\$10 per foot.

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 25 turbine sites in erection sequence;
- REC finalizing sequence of work and schedule update with Project Controls and Project Manager.

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:

- The four (4) remaining foundations will require completion in the Spring due to winter conditions – excavations have been backfilled to protect subgrade;
- Grease for anchor bolts has been received. Installation to commence pending improved weather conditions.

Collection System

Item	Weighted %	Quantity	Total Received	Total Remaining	Percent Complete
Deliveries		Deliveries		77%	
Grounding Transformers	10.0%	6	0	6	0.0%
MV Cable 3/0 AWG AL	15.0%	297,896	237,649	60,247	80%
MV Cable 350 Kcmil AL	7.5%	140,708	56,313	90,091	40%
MV Cable 750 Kcmil AL	15.0%	205,038	111,514	75,623	54%
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	0.0%
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%
Installations		Installations		9%	
Trench	60%	288,150	24,552	263,598	9%
MV & Fiber/Ground Cable	30%	288,150	31,652	257,098	11%
Grounding Transformers	5%	6	0	6	0.0%
Junction Boxes	5%	28	0	28	0.0%
Terminations		Terminations		0.0%	
Grounding Transformers	10.0%	6	0	6	0.0%
Junction Boxes	30.0%	25	0	25	0.0%
Turbines	60.0%	75	0	75	0.0%

Collection System Progress: 28%

Comments:

- Continued to receive MV cable
- Finalizing optimization of directional bores to reduce quantities and/or install bore casings via trenching during frozen conditions;

- Project Manager working with REC to finalize sequence and update construction schedule;

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	%	0	100	0%
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: 23%

Comments:

- Xcel comments were transferred to AB Systems and they are working to issue a final O&M dwg package by 1/16/2015;
- Conducted Kick-off meeting with AB Systems and PCS on 1/9/2015. Safety was the predominant topic of discussion. Recovery of schedule loss due to weather impact was also discussed. AB Systems to issue schedule updates on bi-weekly basis;
- PCS to re-mobilize on Tuesday, 1/13/2015 to commence building erection.

Substation

Item	Weighted	Required	Total Completed	Total Remaining	Percent Complete
Design	20%	Design			
Design Drawings	20%	100	70	30	70.0%
Deliveries	35%	Deliveries			
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%
Construction	45%	Construction			
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:

- Notice of delay issued to Rosendin on 1/8/2015 indicating severe concerns regarding engineering and construction progress;
- Commenced daily update calls between Kenny Knecht and Nate Williams (Rosendin Division Manager);
 - Obtained Rosendin Management commitment to direct engagement in engineering completion, procurement, and construction planning;
 - Obtained commitment for submittal of detailed schedule by Wednesday, January 14, 2015;
 - Obtained commitment dates for completion of all outstanding studies;
 - Obtained commitment dates for submittal of 60% and 90% overall design packages (1/29/15 and 3/7/15, respectively);
 - Rosendin currently working on earlier delivery date for 90% submittal
 - Confirmed that protection & controls and final electrical design being completed by Ulteig;
 - Established plan for open-communication between Ulteig and Xcel to increase submittal and response time to expedite completion of engineering design;



- Rosendin in full support of this direct communication line essentially bypassing Rosendin while keeping them informed of the communication;
 - Obtained commitment from Rosendin management for assignment of Sr. Project Manager to manage the remaining engineering tasks. Rosendin has assigned Kyle Louis, P.E., to the project;
- Submitted responses to outstanding RFIs so Rosendin can complete the foundation IFC drawings;
- Obtained Rosendin commitment to commence foundation construction 2/1/2015;
- Analyzed impact to construction schedule and determined that construction schedule currently not impacted for Substantial Completion; however, current engineering milestones must be achieved.

Exhibit 1 – Site Photographs











Exhibit 2 – Safety log

#	DATE	INCIDENT OBSERVED DURING:	CLASS	CONTRACTOR	INCIDENT DETAILS	CORRECTIVE ACTION DETAILS	ACTION TAKEN TO PREVENT REOCCURRENCE
346	1/7/2015	Normal Work Activities	Near Miss	RES America	When exiting the main office trailer a team member slipped walking down the stairs due to the second step being iced over.	Team member stopped others from using the stairs and then broke up the built up ice and applied "de-ice" to all the steps. Team member then went and checked all of the steps leading into trailers to ensure the hazard wasn't present elsewhere.	All team members informed of the incident and reminded to use caution and maintain 3 points of contact when walking in and out of trailers on stairs.
347	1/8/2015	Safety Walk	Hazardous Condition	RES Americas	The site experienced snow fall at the start of the week and then blizzard conditions, causing large snow drifts in laydown yard and on site access roads.	To ensure the site was accessible, Safety Supervisor Rhine had REC team members arrive before remaining team members to clear site access roads and laydown yard to ensure best possible travel conditions.	Team members were informed the previous nights that team members would be in early to clear site and make travel to site as safe as possible.

Exhibit 3 – Environmental Log

#	CLASS	SUB-CAT	CONTRACTOR	DATE	INCIDENT DETAILS	ACTION TAKEN TO CORRECT SITUATION	ACTION TAKEN TO PREVENT REOCCURANCE
23053-15-15	Observation	Weather Event	N/A	1/5/2015	Frozen subgrade, no snow thaw, wind chill below -15F	Inspect BMPs during thaw conditions	N/A
23053-15-16	Observation	Weather Event	N/A	1/8/2015	Blizzard conditions from 6am to 6pm	Inspect silt fence and other BMPs for wind or other direct damage	N/A

Exhibit 4 – Quality Log

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

Material Receipt

Description of Material	Delivery Date	Vendor	Quantity	Cumulative Qty	Balance
N/A					

Description of Material	NCR Opened	NCR Closed	Total NCR Open	Total NCR Closed
	(Current Week)	(Current Week)	(As of this Week)	(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	



Exhibit 5 - RFI Log

RFI	Generated By	Company	Sent To	Company	Subject	Date Sent	Response Requested By	Type: Civil, Electrical, etc.	Date Closed
23053-01	David Calitz	RES	Nathan Svoboda	Xcel Energy - Generation	Substation Relay Requirements	2/28/2014	3/7/2014	Electrical	03/10/14
23053-02	Kyler Leen	RES	Chris Ayika	Xcel Energy - Transmission	Allowable Voltage Step Change	3/31/2014	4/4/2014	Electrical	05/01/14
23053-03	Kyler Leen	RES	Chris Ayika	Xcel Energy - Transmission	Grid Voltage Profile	3/31/2014	4/4/2014	Electrical	05/01/14
23053-04	Kyler Leen	RES	Bradley Morrison	Xcel Energy - Generation	Main Power Transformer Design	3/31/2014	4/4/2014	Electrical	04/21/14
23053-05	Bob Tepp	RES	Ritchie Farmer	Vestas	Draka 35kV, 3x70mm ² Down-Tower Cable Data	7/16/2014	7/18/2014	Electrical	07/23/14
23053-06	David Calitz	RES	Bradley Morrison	Xcel Energy - Generation	Substation Capacitor Bank Configurations	7/31/2014	8/4/2014	Electrical	08/05/14
23053-07	Kyler Leen	RES	Chris Ayika	Xcel Energy - Transmission	VAR Neutrality	8/5/2014	8/8/2014	Electrical	10/17/14
23053-08	Bob Tepp	RES	Bradley Morrison	Xcel Energy - Generation	T58 Access Road Entrance Culvert Removal	8/13/2014	8/15/2014	Civil	08/14/14
23053-09	Bob Tepp	RES	Bradley Morrison	Xcel Energy - Generation	Access Road Adjustment to T72 and T74	8/18/2014	8/20/2014	Civil	11/19/14
23053-10	Bob Tepp	RES	Bradley Morrison	Xcel Energy - Generation	Access Road Adjustment to T71, T76, and T77	8/18/2014	8/20/2014	Civil	11/19/14
23053-11	Bob Tepp	RES	Bradley Morrison	Xcel Energy - Generation	Access Road Adjustment to T51, T52, T53, and T54	8/18/2014	8/20/2014	Civil	11/19/14
23053-12	Bob Tepp	RES	Bradley Morrison	Xcel Energy - Generation	Access Road Adjustment to T31 and T32	8/18/2014	8/21/2014	Civil	11/19/14
23053-13	Bob Tepp	RES	Bradley Morrison	Xcel Energy - Generation	Access Road Adjustment to T26	8/18/2014	8/21/2014	Civil	11/19/14
23053-14	Bob Tepp	RES	Bradley Morrison	Xcel Energy - Generation	Access Road Adjustment to T22	8/18/2014	8/21/2014	Civil	08/28/14
23053-15	Julio Lima	RES	Chris Ayika	Xcel Energy - Transmission	Peace Garden dead end structures GPS coordinates	8/21/2014	8/25/2014	Electrical	08/25/14
23053-16	Kyler Leen	RES	Chris Ayika	Xcel Energy - Transmission	Dynamic Reactive Power Inputs	9/9/2014	9/16/2014	Electrical	11/24/14
23053-17	Kyler Leen	RES	Richard Farmer	Vestas	WTG Conduit Type and Location	9/24/2014	10/1/2014	Electrical	10/03/14
23053-18	David Calitz	RES	Bradley Morrison	Xcel Energy - Generation	HV and MV disconnect switch requirements	9/26/2014	10/3/2014	Electrical	10/07/14
23053-19	Shabeeb Abdul Khader	RES	Bradley Morrison	Xcel Energy - Generation	Use aggregate from Marcel Pit	9/29/2014	10/1/2014	Civil	10/06/14
23053-20	Julio Lima	RES	Rich Rhode	Rosendin Electric	Plan and Schedule for material delivery in the load restriction period	9/30/2014	10/3/2014	Electrical	11/25/14
23053-21	Shabeeb Abdul Khader	RES	Bradley Morrison	Xcel Energy - Generation	Substation Foundation	10/8/2014	10/10/2014	Civil	10/09/14
23053-22	Shabeeb Abdul Khader	RES	Bradley Morrison	Xcel Energy - Generation	Access road adjustments to T19, T20, T79/T80, T21/T22, T15, T10/T11, T5, and T30, T1/T2	10/9/2014	10/16/2014	Civil	11/19/14
23053-23	Shabeeb Abdul Khader	RES	Bradley Morrison	Xcel Energy - Generation	Access road adjustments to T33/34	10/13/2014	10/20/2014	Civil	10/16/14
23053-24	Shabeeb Abdul Khader	RES	Bradley Morrison	Xcel Energy - Generation	Access road adjustments to T26	10/14/2014	10/21/2014	Civil	10/16/14
23053-25	Aaron Thooft	RES	Bradley Morrison	Xcel Energy - Generation	Collector System - Circuit 5 route - realignment	10/15/2014	10/22/2014	Electrical	Closed
23053-26	Shabeeb Abdul Khader	RES	Richard Farmer	Vestas	WTG Installation Manuals for the Mk7H and Mk10 V100-2.0 VCSS turbines	10/17/2014	10/21/2014	Electrical	10/23/14
23053-27	Shabeeb Abdul Khader	RES	Richard Farmer	Vestas	Grounding kit installation for T3	10/20/2014	10/27/2014	Electrical	10/29/14
23053-28	Shabeeb Abdul Khader	RES	Bradley Morrison	Xcel Energy - Generation	Concrete Slurry mix design for the Substation	10/22/2014	10/28/2014	Civil	10/31/14
23053-29	Shabeeb Abdul Khader	RES	Richard Farmer	Vestas	Generator Data Sheet	10/23/2014	10/30/2014	Electrical	10/29/14
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	
23053-31	Shabeeb Abdul Khader	RES	Bradley Morrison	Xcel Energy - Generation	Above grade containment at MPT foundation	11/5/2014	11/11/2014	Civil	
23053-32	Lester Archer	RES	Bradley Morrison, Dragana Hadzimanovic	Xcel Energy - Generation	X-MR Conduit Placement at MPT	12/1/2014	12/5/2014	Electrical	Closed
23053-33	Emad Alaydi	RES	Bradley Morrison	Xcel Energy - Generation	SCADA SOW	12/3/2014	12/10/2014	O&M	12/17/14
23053-34	Emad Alaydi	RES	Bradley Morrison	Xcel Energy - Generation	O&M Potable Water Supply	12/11/2014	12/17/2014	O&M	
23053-35	Emad Alaydi	RES	Tim Boardman	AB Systems	O&M Foundation Protection	12/12/2014	12/18/2014	O&M	
23053-36	Lester Archer	RES	Brad Morrison	Xcel Energy - Generation	Capacitor Bank System	12/17/2014	12/29/2014	Electrical	Closed
23053-37	Lester Archer	RES	Brad Morrison	Xcel Energy - Generation	Excavation and Slurry placement at Substation	12/22/2014	1/1/2015	Electrical	