BORDER WINDS ENERGY PROJECT

WEEKLY PROJECT REPORT

Weekly report no:	64
Report for week period ending COB Friday:	10/16/15
Calendar week no:	42

Executive Summary

Week's Highlights

- Coordinate clean up and recycle efforts site wide.
- HSQE environmental manager and Xcel environmental representative were onsite to perform a site wide environmental audit.
- Completed the week with no spill/leaks.
- Thirty-seven (37) rock surrounds have been installed to date.
- Reclamation of collection line and junction boxes is ongoing.
- Reclamation of turbine sites and access roads is ongoing.
- Additional equipment and operators have arrived onsite to assist in the successful reclamation of the project.

Week's Key Issues

- A curtailment was scheduled due to transmission work resulting in the Border Wind Farm scheduled to '0' output from 10/16/15 to 10/22/15. On the evening of 10/16/2015 the curtailment was cancelled.
- An investigation is ongoing to determine the root cause of the substation fault that caused circuits to become de-energized on 10/16/15. Circuit re-energization is scheduled for 10/17/2015.

Safety

Type	Lost Time	Recordable Injury (Medical Aid)	Minor Injury (First Aid)	Equipment Property Damage	Near Miss	Safety Walks
Current Period	0	0	0	0	0	6
Project To Date	1	5	14	48	89	705

*Full description of week's Safety Log plus the formulas for TRIR and Safety index calculation in Exhibit 2.

TRIR: Previous Week =2.6 / Current week = 2.6

RES Safety Index: Previous Week =0.48 / Current week =0.58

Weeks Highlights:

- The erection crew has completed turbine erection and mechanical completion and has de-mobilized from site.
- All circuits are now energized, the final energization of circuit 2 went as planned and no incidents to report thanks to everyone involved on making this happen.

Weeks Issues:

- No equipment damage, property damage or vehicle damages occurred during the reporting period.
- Weather is changing fast colder temperatures weekly, mornings are now in the 20 to 30 degree range and day time temperatures are in the 40 and 50 degree range, we can expect to see this trend continue, workers are reminded to come prepared and dress warm.

Project Work Hours:

- Weekly Man-hours: 4,185.00
- Total Project Man-hours: 458,985.00
- Hours since Last Recordable Injury: 39,492.00

Environmental

Type	Major Incident	Minor Incident	Near Miss	Observation
Current Period	0	0	1	3
Project to Date	0	80	9	83

*Full description of week's Environmental Report and Rolling Incident Score formula in Exhibit 2.

Rolling Incident Score: Previous week: 0.50 / Current Week: 0.49

Comments:

- RES HSQE environmental manager and Xcel environmental representative were on site and performed a site wide environmental audit, discussed final restoration plan and BMPs.
- AMR replaced five (5) aluminum recycling bins and four (4) bins of mixed wood, cardboard and plastic.
- Waste management replaced two (2) trash bins in the laydown yard.
- Completed the week with no spill/leaks.
- Completed BMP inspection across the site and continue to remove silt from the culverts. Working to restore the site.
- Spotted a bald eagle on a tree, near a house near 106st and Hwy 30, on 10/11/15. The siting was reported and no actions were required as the eagle flew away.

Quality

Type	RES Issued NCRs				Client Issued NCRs		
	Issued	Open	Closed		Issued	Open	Closed
Current Period	0	0	0		0	0	0
PTD	4	1	3		14	5	9

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

Week's Highlights:

- Xcel representative continue to review the job books.
- Working through and correcting any comments on job books.

SCHEDULE STATUS

Project duration	68
No. of weeks into contract	68
Contract time passed (%)	100%

Key Activities (Construction)	Weighted %	Percentage Complete		
		Contract Schedule	Construction Schedule	Actual
Design Engineering	2.5%	100.0%	100%	100%
Roads & Crane Pads	20.0%	100.0%	98%	91%
Foundations	20.0%	100.0%	100%	100%
Collection System	21.5%	100.0%	100%	100%
Substation	15.0%	100.0%	100%	99%
O&M Building	6.0%	100.0%	100%	99%
WTG Delivery, Erection, & MCC	15.0%	100.0%	100%	99%
Overall Actual Percent Complete		**100%**	**99%**	**98%**

PROGRESS REPORT

PERMIT STATUS

Permit Type / Description	County / State	Responsible Group	Date Needed By	Status
FAA Part 2	Federal	RES	Final Height	CLOSED

CONSTRUCTION STATUS

Certificates	Total	Submitted	Signed
Foundation Completion Certificate	75	75	75
Mechanical Completion Certificate	75	75	75
Electrical Works Substantial Completion Certificate	7	7	7
Project Substantial Completion Certificate	1	0	0
Project Final Completion Certificate	1	0	0

ROADS AND CRANE PADS

Item	Weighted %	Budget	Total Completed	Total Remaining	Percent Complete
Roads	70%	Roads			**83.0%**
Rough Grade	30%	137,622	152,837	(15,215)	111.1%
Sub Grade	30%	137,622	141,772	(4,150)	103.0%
1st Lift	20%	137,622	153,875	(16,253)	111.8%
Reclamation	10%	152,837	51,260	123,798	33.0%
Crane Pads	30%	Crane Pads			**100%**
WTG Site Ready for Delivery	30%	75	75	0	100%
Cut & Subgrade Compacted	40%	75	75	0	100%
Material Placed & Compacted	30%	75	75	0	100%
			Road and Crane Pad Progress		91%

Comments:

- Continue reclaiming turbine sites and access roads on circuit 3 and circuit 4.
- Reclamation on 37 turbine sites as been completed.
- 37 rock surrounds have been installed.
- Additional crews and equipment have arrived on site to aid in the restoration process.

COLLECTION SYSTEM

Item	Weighted %	Quantity	Total Received	Total Remaining	Percent Complete
Deliveries	**30.0%**		**Deliveries**		**100%**
MV Cable	50.0%	901,972	314,910	0	100%
Fiber	40.0%	335,107	336,590	0	100%
Junction Boxes	5.0%	28	28	0	100%
Grounding Transformers	5.0%	6	6	0	100%
Installations	**50.0%**		**Installations**		**100%**
Trench	40.0%	278,230	278,230	0	100%
MV & Fiber/Ground Cable	50.0%	297,945	297,945	0	100%
Junction Boxes	10.0%	28	28	0	100%
Terminations	**20.0%**		**Terminations**		**100%**
MV Cable at WTG switch gear	45.0%	75	75	0	100.0%
Junction Boxes	35.0%	28	28	0	100.0%
Underground MV Splices	20.0%	50	50	0	100.0%
			Collection System Progress:		**100%**

Comments:

- Working on completing all reclaim and re-leveling of the junction boxes.
- Closing and reclaiming all fiber splice pits on site.
- Assembling survey information and coordinates for junction boxes, MV splices, and fiber splices for job books.
- Removing wire from MV reels and coordinating shipping of reels back to manufacturer.
- Coordination of shipping of scrap wire for recycling is ongoing.
- Removing scrap fiber for recycling and dispose of reels is ongoing.
- Energized remainder of circuit 2 which completed all energization for the collection system.
- Due to the circuits being de-energized crews took the opportunity to address junction box punchlist items.
- Awaiting arrival of jig to install bollards at junction boxes.

O&M BUILDING

Item	Weighted %	Budget	Total Completed	Total Remaining	Percent Complete
Design	4.0%	100%	100%	0%	100.0%
Earthworks	8.0%	100%	100%	0%	100.0%
Septic System	4.0%	100%	100%	0%	100.0%
Water Service and Filter	4.0%	100%	100%	0%	100.0%
Delivery	5.0%	100%	100%	0%	100.0%
Foundation Floor slab	9.0%	100%	100%	0%	100.0%
Electrical prep, rough-in and trim out	5.0%	100%	100%	0%	100.0%
Plumbing prep, rough-in and trim out	8.0%	100%	100%	0%	100.0%
Building Erect and enclose	8.0%	100%	100%	0%	100.0%
Internal Walls & Ceiling	9.0%	100%	100%	0%	100.0%
HVAC	8.0%	100%	100%	0%	100.0%
Finishes prep, rough-in and trim out	12.0%	100%	100%	0%	100.0%
Grading, Drainage	8.0%	100%	97%	3%	97.0%
Cleaning and Shop Finish	4.0%	100%	100%	0%	100.0%
Security System	4.0%	100%	100%	0%	100.0%
O&M Building Progress					**99.7%**

Comments:

- Submitted O&M building punchlist to Xcel for review.
- Scheduling AB Systems to complete the punch list item.
- Received the O&M building job books from AB Systems.

SUBSTATION

Item	Weighted %	Budget	Total Completed	Total Remaining	Percent Complete
Engineering	**10%**		**Engineering**		**100%**
IFC Drawings	**100%**	**100%**	**100%**	**0%**	**100%**
Procurement and Delivery	**20%**		**Procurement and Delivery**		**100%**
Foundation Rebar & Cages	5.00%	100%	100%	0%	100%
Breakers - Low and High Sides	15.00%	100%	100%	0%	100%
Reactors, Cap Back and Switchers	20.00%	100%	100%	0%	100%
MPT 230/34.5kV	10.00%	100%	100%	0%	100%
Grounding Transformer	5.00%	100%	100%	0%	100%
EEE - Control Building with DC Station	15.00%	100%	100%	0%	100%
Grounding Wire, Rods and Accessories	5.00%	100%	100%	0%	100%
Dead End and Static Mast	5.00%	100%	100%	0%	100%
Structural Steel and Bus	10.00%	100%	100%	0%	100%
MET Tower Foundation	5.00%	100%	100%	0%	100%
Chain Link Fence and Gates	5.00%	100%	100%	0%	100%
Construction	**70%**		**Construction**		**99%**
Site Preparation & Grading	3.00%	100%	100%	0%	100%
Site Aggregate and Finishing Rock	3.00%	100%	100%	0%	100%
Foundations work for substation	9.00%	100%	100%	0%	100%
Breakers, Switches, PTs, CTs	12.00%	100%	100%	0%	100%
Reactors, Cap Back and Switchers	8.00%	100%	100%	0%	100%
EEE - Energize and Finish	4.00%	100%	100%	0%	100%
Ground Grid, Conduits, Trenwa	12.00%	100%	100%	0%	100%
Structural Steel, Risers, Bus	12.00%	100%	100%	0%	100%
Collection Risers/Feeders and GTs	8.00%	100%	100%	0%	100%
EEE Wire Pull, Termination and Test	5.00%	100%	100%	0%	100%
SCADA Fiber Optic Cables Pull	4.00%	100%	100%	0%	100%
Chain Link Fence, Gates	4.00%	100%	100%	0%	100%
MPT Testing and Commissioning	4.00%	100%	100%	0%	100%
MET Tower Install, Wiring and Testing	4.00%	100%	99%	1%	99%
Substation Commissioning	6.00%	100%	100%	0%	100%
Handover of Job Books	2.00%	100%	100%	0%	100%
			Substation Progress		**99.9%**

Comments:

- Xcel notified RES on 10/13/15 that due to scheduled transmission work and resulting abnormal transmission configuration the Border Wind Farm will be scheduled to '0' output from 0500hrs 10/16/15 to 1900hrs on 10/22/15. On 10/16/2015 scheduled curtailment was cancelled and the project was released for full production.
- Call was received from Vestas Service early on the morning of 10/16/15 informing RES that the park was producing 0MW. Investigation is ongoing due to determine the root cause of the substation fault.
- Met tower completion will be completed when the missing cable arrives.
- Training for the substation has been scheduled for 10/22/2015 and 10/23/2015.

TURBINES

	Weighted %	Budget	Total Received	Total Remaining	Percent Complete
Deliveries	**20.0%**	**Delivered to turbine pad**			**100.0%**
Base	15.0%	75	75	0	100.0%
Mid	14.0%	75	75	0	100.0%
Upper Mid	14.0%	75	75	0	100.0%
Top	14.0%	75	75	0	100.0%
Nacelle	14.0%	75	75	0	100.0%
Hub	14.0%	75	75	0	100.0%
Blades	15.0%	75	75	0	100.0%
Erection	**60.0%**	**Erection**			**100%**
Base	17.0%	75	75	0	100.0%
Mid	16.0%	75	75	0	100.0%
Upper Mid	16.0%	75	75	0	100.0%
Top	17.0%	75	75	0	100.0%
Nacelle	17.0%	75	75	0	100.0%
Blades	17.0%	75	75	0	100.0%
Mechanical Completions	**20.0%**	**Mechanical Completions**			**100%**
Walk downs	33.3%	75	75	0	100%
MCC Submitted	33.3%	75	75	0	100%
MCC Signed	33.4%	75	75	0	100%
Turbines Progress					**100%**

Week's Highlights

- All mechanical completion walk downs were completed and all applicable certificates were submitted and executed.
- All WTGs were commissioned and applicable certificates submitted and executed.
- Completed LR 1600 crane breakdown and demobilization at T80.

Week's Issues

- WWS replaced the broken fiber at T75 on 10/9/15.
- Xcel transmission issued an emergency curtailment to 0 for system reliability check 10/14/15, resulting in a a delay in tower commissioning. Curtailment was lifted 10/15/15 allowing Vestas to complete commissioning.

Exhibit 1 – Site Photographs

Site View of Substation

Demobilization of Turbine Yard

Site View

Demobilizing

Arc Flash Testing T80

Cable Reel Return

Exhibit 2 – Safety Log

Formulas for TRIR and RES Safety Index calculation:

TRIR = ((Lost Time + Medical Aid) * 200,000) / Total Project Man Hours ((1+5) *200,000)/ 458,985
RES Safety Index = ((Lost Time*64) + (Recordable Injury*16) + (Minor Injury*4) + (Damage * 1) + (Near Miss*0.25))/Man Hours*1000
((1*64) + (5*16) + (14*4) + (48*1) + (89*.25)) / 458,985 * 1000

#	Date:	Incident Observed During:	Incident Type:	Company Involved:	Incident Details:	Corrective Action Details:	Actions Taken to Prevent Reoccurrence:
903	10/10/2015	Safety Walk	Hazard Observation	All RES Site	During the night and most of the morning dangerous high winds 55 to 65 mph, no work on site in the am and use extreme caution with all doors, material and flying debris, site wide alert.	All managers, employees and sub-contractors are under severe weather warning until 10:00 am, no work in the towers and on site until conditions improve.	No action can be taken for a recurrence, early warning and alerts can help notify employees before work starts to help prevent injuries and property damage.
904	10/11/2015	Safety Walk	Hazard Observation	MCI Trucking	Driver arrived on site without the proper PPE.	The site loaned the driver PPE so he could be loaded out, I contacted MCI owner and informed him that all his drivers need to have all required PPE before coming to the project, no strike issued.	MCI Trucking Co. owner was notified that all drivers from his company must come with all the proper PPE before entering the project, he assured the safety supervisor from now on all drivers will come with all PPE.
905	10/12/2015	Safety Walk	Safe Work Observation	RES Civil	Laydown yard workers are taking wire off of spools all three workers using the proper gloves for the job, good JHA for the work being performed.	None required at this time.	None needed.

#	Date:	Incident Observed During:	Incident Type:	Company Involved:	Incident Details:	Corrective Action Details:	Actions Taken to Prevent Reoccurrence:
906	10/15/2015	Safety Walk	Safe Work Observation	RES Civil	Laydown yard workers are taking wire off of spools all three workers using the proper gloves for the job, good JHA for the work being performed.	None required at this time.	None needed.
907	10/15/2015	Safety Walk	Hazard Observation	RES Erection	RES crew loading crane matts on to the flatbed truck were using a spotter and made sure driver was clear of load, good team effort.	None required at this time.	Training was provided to the employee why he needs to wear a full face shield when using the power washer or anything that could have high pressure.
908	10/12/2015	Safety Inspection	Safe Work Observation	RES Civil	RES employee was using the power washer and did not have a full face shield on.	Worker was not aware he needed a full face shield to operate the power washer; he did have safety glasses on.	None needed.
909	10/12/2015	Safety Inspection	Damage	Hancock Trucking	3.3 Fire Prevention-RES trailers and on the job site all fire extinguishers have had their monthly inspection, found no faulty equipment.	None required at this time.	Safety Supervisor talked with the laydown yard crew and the tool manager to make sure and inspect all cords that are used outdoors, for any type of damage monthly.

Exhibit 3 – Environmental Log

Formula for the Rolling Incident Score = .49

((Major Incident * 16) + (Minor Incident * 4) + (Near Miss * 0.25) + (Observation * 0)) * 1000 / Total Man Hours

#	CLASS	SUB-CAT	CONTRACTOR	DATE	INCIDENT DETAILS	ACTION TAKEN TO CORRECT SITUATION	ACTION TAKEN TO PREVENT REOCCURANCE
134	Observation	Wildlife	RES	10/11/2015	Spotted a single bald eagle on a tree next to a dwelling near 106st and Hwy 30 away from construction activities. The eagle flew away safely and unharmed.	No action required. Documented on RAEMT 05.	No action required.
135	Observation	Informational	RES	10/12/2015	Xcel inspection of site focusing on BMPs and restoration plan.	RES inspected areas of Xcel comment. Additional Xcel inspection scheduled on 10/16/15.	
136	Near Miss	Lack of or Damaged BMP	RES	10/16/2015	Inspected site with A Jensen	Develop punch list integrated with Xcel list. Coordination meeting held with REC forces and Steve Thomas.	Develop master schedule to move from west to east side.
137	Observation	Informational	RES	10/16/2015	AMR replaced 5 bins (aluminum recycling) and 4 bins (wood, cardboard, plastic recycling) and WM replaced 2 bins (trash)		

Exhibit 4 – Quality Log

- Incidents - None
- CPARs - 1
- NCRs - 14

NCR log

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			6	9
NCR-2015-035 Not having 220VAC outlet in the nacelle			X	
NCR-2015-034 Turnover 75 climb assist pendants			X	
NCR-2015-026 Not having 115V outlets at work locations per page 1 exhibit I of the Purchase and Sale Agreement.			X	
NCR CPAR 23053-004 Sent to Vestas concerning the high rate of damage to the turbine blades during shipping.			X	
NCR-2015-031 Service loop not verified at Junction boxes and splice pits			X	
NCR-2015-037 Water ponding for access to T1.			X	

Exhibit 5 – RFI Log

Outgoing RFIs

	Generated By	Company	Sent To	Company	Subject	Date Sent	Response Requested By	Type: Civil, Electrical, etc.	Status / Comments	Date Closed
23053-105	Kyler Leen	RES	Kyle Louis	REI	Feeder Fault Clearing Time	07/27/15	07/29/15	Substation		
23053-113	Kyler Leen	RES	Ritchie Farmer	Vestas	WTG Nacelle transformer current rating	10/02/15	ASAP	Turbine		10/08/15
23053-114	Shabeeb Khader	RES	Chris Ayika	Xcel Energy - Transmission	Substation Interconnect Data	10/03/15	10/07/15	SCADA		

Exhibit 6 - Change Order Request Log

CO No.	Date Identified	Date Submitted	Date Executed	Description	Value of CO	Comments
1	06/11/15			Change in the landscaping design - larger trees for windbreak at O&M	$ 3,176.00	RES and Xcel agreed to split total cost of $6,352.00
2	06/11/15			Storm shelter changes at O&M	$ 11,907.00	RES to request additional information from ABS on who directed the changes
3	06/11/15			Changes in final design vs specification of electrical layout at O&M	$ 2,300	RES is still working through the changes
4	06/11/15			Changes in security system at O&M	$ 8,936.00	Xcel requested breakdown of changes and the delta
5	06/11/15			Changes in the Control Building - Increasing the station service transformer, additional switch requests, and additional landings at entrance doors	$ 36,141.00	Station Service transformer sizing – Original station service transformer sizing was done at 50kVA. This was based on historic numbers initially and was later proven by station service calculations. Xcel requested to change this to 100kVA, since that is the Xcel standard (was requested at the 90% design review meeting). RES reviewed the Xcel standards provided and did not see this requirement anywhere in the standards provided. This increase in station service size also required upgrading multiple disconnect and safety switches from 200A to 400A rating in order to meet the requirements of the 100kVA station service transformer to be installed per the Xcel direction/request. Additional switch requests - Xcel requested during the 90% design review meeting that safety disconnect switches be moved from inside the control building to the outside. This requires the installation of waterproof cabinets for the switches. Xcel also requested an additional yard cabinet to connect and supply larger equipment from the AC system. Addition of landings at entrance doors – this was added at the 90% design review meeting per Xcel request and was not evident for the provided Xcel specifications.

CO No.	Date Identified	Date Submitted	Date Executed	Description	Value of CO	Comments
6	06/11/15			Upgrade from SEL351 to SEL421 relay and bus relays at the substation	$ 163,789.00	Industry standard for wind farm collection circuits are to install SEL351 relays (O/C & G/F) relays to protect the collector systems. Collection systems (although balanced) are considered distribution circuits, since they are four wire systems, with a ground reference transformer connected to each circuit. The collection circuits are insulated to 150kV BIL, which is further evidence that they are considered as distribution feeders (compared to the 200kV BIL insulation levels typically associated with transmission lines/circuits). Xcel identified the requirement to install SEL 351 relays on Distribution feeders. During design review meetings, Xcel classified these as transmission lines an required the installation of step distance protection (SEL421 relays). This resulted in additional cost. The 34.5kV bus differential relays subsequently were also upgraded from distribution bus relays to transmission class bus diff relays with 100% redundancy
7	06/11/15			Addition of three additional shield masts at the substation	$ 73,838.00	The original substation design utilized a combination of shield masts and shield wires in order to establish a lightning shielding system for the substation equipment. During the 60% design review meeting Xcel indicated they do not allow shield wires to span over top of equipment and requested that the shield wires be removed and that lightning shielding protection be done with shield masts. This requirement is not seen in any of the supplied specifications. This required the addition of 3 additional shield masts and thus additional cost.
8	06/11/15			Addition of anchor/rigging points for the oil containment based on the change to above ground containment system at the substation	$ 36,907.00	Xcel required an above grade containment system with a removable wall and built in rigging/anchor points in the containment system. This was not evident in any of the provided specifications or the contract agreement. The above grade construction as such does not add cost, but the inclusion of the removable wall and the addition of the anchor/rigging points that is integrated into the oil containment system does add cost
9	06/11/15			Addition of separate relay/plc controller to control the capacitor banks at the substation	$ 23,510.00	Typical capacitor bank controls on wind farms are done by the wind farm controller through the SCADA system. Xcel requested during the 90% design review not to control the equipment through the SCADA system, but rather have a separate relay/plc controller to control the capacitor banks. This required the installation of an additional relay in order to have a dedicated controller for the capacitor banks. This was not evident form any of the supplied specifications, since Xcel does not have a standard specification for 34.5kV capacitor banks.

CO No.	Date Identified	Date Submitted	Date Executed	Description	Value of CO	Comments
10	06/11/15			Upgrade to the capacitor bank interlock system	$ 10,846.00	Typical interlocks for capacitor banks only include a time delay after opening the associated capacitor/circuit switched to release a key that will unlock the ground switch and lock the switcher in the open position. Xcel requires a much more elaborate system, which in turn costs more. This was not identified in any of the supplied standard and was determined as designs progressed.
	TOTAL				$ 379,294.00	