



MERRICOURT SUBSTATION
EPCS/ECI MONTHLY PROJECT STATUS REPORT

DATE: September 26, 2019

1. SAFETY

- a. Safety orientation will be given to all persons working on site.
- b. Daily safety tailboard meetings are being held daily at show up (Substation).
 - i. Keep eye contact with the operator if approaching equipment.
 - ii. Keep non-construction personal off the site unless accompanied with a qualified person.
 - iii. Spot trucks as they are unloading.
 - iv. Barricade any open excavations.
 - v.
- c. There have been no recordable incidents this month.

Project Name: Merricourt Substation Project	
Location: McIntosh County, ND	
Major "EPC" Contractor: Wanzek	
Turbine Supplier: NA	
EPCS Monthly Man Hours	
September Hours	TOTALS:
Number of Monthly MAN HOURS (break-down needed):	302.50
EPCS Substation Construction Manager	66.50
(Site Grading Strata)	215.50
(Fence)	0.00
(Substation)	0.00
Interstate Surveying	7.00
Terracon Testing	5.50
Pine Country Nursery	8.00
EPCS Testing	0.00
	0.00
	0.00
* EDF Site Rep. TEAM (if applicable)	
EPCS Project RIR to date:	0
EPCS Project DART to date:	0
EPCS Project SR to date:	0
EPCS Project FR to date:	0
Fatalities:	0
EPCS First Aid Only:	0
EPCS Near Miss/Good Catch:	0
EPCS Property Damage:	0
Recordable w/NO LOST DAYS:	0
Recordable w/LOST DAYS:	0
Number of DAYS LOST:	0
Number of hours worked (MONTH):	302.50
Number of hours worked (Previous Months):	0.00
Total Hours Worked on the Project:	302.50

2. MERRICOURT SUBSTATION ENGINEERING

a. Substation Design Drawings:

i. Physical design

1. 30% design package was submitted for EDF review on June 19, 2019. Comments were received on July 10th.
2. 60% design package was submitted for EDF review on September 6, 2019. EDF electrical and OTP comments were received on September 20th. Civil comments are outstanding.
3. Site prep design was issued for construction on August 29, 2019.

ii. Electrical design

1. 30% design package was submitted for EDF review on June 19, 2019. Comments were received on July 10th.
2. 60% design package is through design and is currently being reviewed internally. We expect to have this package ready to submit for review the first part of October.

b. MERRICOURT SUBSTATION MATERIALS

c. Material Status:

- i. Major equipment has been ordered.
- ii. Cap banks, DVAR (2 MVAR), and tapered steel have been ordered.
- iii. Items not ordered are the reactors.

3. MERRICOURT SUBSTATION CONSTRUCTION

a. Contractor Staffing:

- i. EPC Services Company: 1
- ii. Site work : 3
- iii. Foundations: 0
- iv. Electrical: 0
- v. Total: 0

b. Construction Activities:

- i. Site work is in progress. Stripping is complete along with the pad is brought to elevation.
- ii. Over-X for foundations is being done ahead of completing the site work.
- iii. BMP's have been installed.
- iv. Foundations and fence are being scheduled to start around October 7th. We will start with the transformer foundation.

c. Progress to Date:

- | | |
|----------------------------|-----|
| i. Site Work | 40% |
| ii. Foundations | 0% |
| iii. Fence | 0% |
| iv. Below Grade work | 0% |
| v. Steel Structures | 0% |
| vi. Electrical Equipment | 0% |
| vii. Control Building | 0% |
| viii. Control Panels | 0% |
| ix. Bus Work | 0% |
| x. Control Cable and Terms | 0% |

- | | |
|-----------------|----|
| xi. Finish Rock | 0% |
| xii. Testing | 0% |

4. MERRICOURT SUBSTATION SCADA:

- a. SCADA design is progressing well. Conversations and meetings between ECI, EDF & OTP have been positive & productive.

5. MERRICOURT SUBSTATION STUDIES:

- a. Insulation Coordination
 - i. Initial study was issued for EDF review on September 20, 2019.
- b. Reactive Power Study
 - i. Initial study was submitted for EDF review on June 14, 2019. Comments were received on June 18th.
 - ii. Missing Vestas information was received September 19th. We are reviewing internally to determine the potential additional reactive needs at the substation.
- c. Short Circuit Analysis
 - i. Initial study was submitted for EDF review on June 19, 2019. Comments were received on July 10th.
 - ii. Next version of the study will be available when NGR sizing has been provided and major equipment drawings are available.

6. LANDOWNER & LOCAL COMMUNITY ISSUES & LOCAL SPEND:

- a. Contractors
 - i. Approximately \$X,XXX
- b. Materials
 - i. Approximately \$10,000
- c. Living Expense
 - i. Motels - Approximately \$500
 - ii. Meals - Approximately \$75
 - iii. Gas - Approximately \$250
- d. **Total Spending \$10,825**

7. MERRICOURT SUBSTATION RECENT PROJECT PHOTOS:

MERRICOURT SUBSTATION PROJECT

Monthly Status Report

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MERRICOURT SUBSTATION PROJECT

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8. MERRICOURT SUBSTATION SCHEDULE:

EPCS-435 Merricourt Wind

Data Date, 18-Sep-19

Activity ID	Activity Name	Responsibility	Activity Status	Activity % Complete	Remaining Duration	Original Duration	BL Project Start	BL Project Finish	Start	Finish	Variance - BL Project	2019												2020												2021	
												Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
EPCS-435 Merricourt Wind Energy Substation																																					
Project Initiation																																					
6.4w																																					
15.6w																																					
26-Jun-19																																					
16-Dec-19																																					
16-Jul-19 A																																					
01-Nov-19																																					
-2.6w																																					
Drawing & Data Requests																																					
6.4w																																					
15.6w																																					
26-Jun-19																																					
16-Dec-19																																					
16-Jul-19 A																																					
01-Nov-19																																					
-2.6w																																					
SS0200	Submit Collection IFC	Owner	In Progress	60%	6.4w	15.6w	26-Jun-19	16-Dec-19	16-Jul-19 A	01-Nov-19	-2.6w																										
Substation Detailed Physical Design																																					
0.2w																																					
2.0w																																					
04-Sep-19																																					
17-Sep-19																																					
06-Sep-19 A																																					
19-Sep-19																																					
-0.4w																																					
Physical Design Package																																					
0.2w																																					
2.0w																																					
04-Sep-19																																					
17-Sep-19																																					
06-Sep-19 A																																					
19-Sep-19																																					
-0.4w																																					
SS0390	Owner Review - 60% Physical Package	Owner	In Progress	90%	0.2w	2.0w	04-Sep-19	17-Sep-19	06-Sep-19 A	19-Sep-19	-0.4w																										
SS0390.1	OTP Review - 60% Physical Package	Other	In Progress	90%	0.2w	2.0w	04-Sep-19	17-Sep-19	06-Sep-19 A	19-Sep-19	-0.4w																										
Protection and Control Detailed Design																																					
12.0w																																					
12.0w																																					
27-Aug-19																																					
13-Feb-20																																					
14-Oct-19																																					
10-Jan-20																																					
-6.6w																																					
AC and DC Schematics																																					
2.0w																																					
2.0w																																					
27-Aug-19																																					
10-Sep-19																																					
14-Oct-19																																					
25-Oct-19																																					
-6.6w																																					
SS0490	Owner Review - Schematics	Owner	Not Started	0%	2.0w	2.0w	27-Aug-19	10-Sep-19	14-Oct-19	25-Oct-19	-6.6w																										
SS0490.1	OTP Review - Schematics	Other	Not Started	0%	2.0w	2.0w	27-Aug-19	10-Sep-19	14-Oct-19	25-Oct-19	-6.6w																										
Wiring and Connections Diagrams																																					
2.0w																																					
2.0w																																					
06-Nov-19																																					
19-Nov-19																																					
27-Dec-19																																					
10-Jan-20																																					
-6.6w																																					
SS0540	Owner Review - Entire Electrical Package	Owner	Not Started	0%	2.0w	2.0w	06-Nov-19	19-Nov-19	27-Dec-19	10-Jan-20	-6.6w																										
SS0540.2	OTP Review - Entire Electrical Package	Other	Not Started	0%	2.0w	2.0w	06-Nov-19	19-Nov-19	27-Dec-19	10-Jan-20	-6.6w																										
Relay Settings																																					
2.0w																																					
2.0w																																					
31-Jan-20																																					
13-Feb-20																																					
19-Dec-19																																					
06-Jan-20																																					
5.6w																																					
SS0590	Owner Review- Relay Settings (Includes OTP Review)	Owner	Not Started	0%	2.0w	2.0w	31-Jan-20	13-Feb-20	19-Dec-19	06-Jan-20	5.6w																										
Construction Issue																																					
17.2w																																					
17.2w																																					
25-Sep-19																																					
05-Dec-19																																					
20-Sep-19																																					
24-Jan-20																																					
0.6w																																					
For Construction Drawing & Specification Package - Construction Issue																																					
17.2w																																					
17.2w																																					
25-Sep-19																																					
05-Dec-19																																					
20-Sep-19																																					
24-Jan-20																																					
0.6w																																					
SS0766	Foundation Drawing Package - Construction Issue	ECI	Not Started	0%	1.0w	1.0w	25-Sep-19	01-Oct-19	20-Sep-19	26-Sep-19	0.6w																										
SS0770	Physical Drawing Package - Construction Issue	ECI	Not Started	0%	1.0w	1.0w	25-Sep-19	01-Oct-19	08-Oct-19	14-Oct-19	-1.8w																										
SS0770.1	Owner Review - Physical Drawing Package Construction Issue	Owner	Not Started	0%	2.0w	2.0w	02-Oct-19	15-Oct-19	15-Oct-19	28-Oct-19	-1.8w																										
SS0780	Electrical Drawing Package - Construction Issue	ECI	Not Started	0%	1.0w	1.0w	27-Nov-19	05-Dec-19	20-Jan-20	24-Jan-20	-6.6w																										
Construction																																					
48.4w																																					
48.4w																																					
17-Sep-19																																					
01-Sep-20																																					
19-Sep-19																																					
01-Sep-20																																					
-0.4w																																					
SS2011	Site Work	EPCS	Not Started	0%	2.0w	2.0w	17-Sep-19	30-Sep-19	19-Sep-19	02-Oct-19	-0.4w																										
SS2012	Foundations / Fence	EPCS	Not Started	0%	4.0w	4.0w	02-Oct-19	29-Oct-19	03-Oct-19	30-Oct-19	-0.2w																										
SS2013	Transformer Pad Ready	EPCS	Not Started	0%	0.0w	0.0w		04-Nov-19		04-Nov-19	0.0w																										
SS2014	Below Grade Conduit & Grounding	EPCS	Not Started	0%	3.0w	3.0w	30-Oct-19	19-Nov-19	31-Oct-19	20-Nov-19	-0.2w																										
SS2016	Steel, Insulators & Switches	EPCS	Not Started	0%	2.0w	2.0w	06-Dec-19	19-Dec-19	20-Nov-19	05-Dec-19	2.0w																										
SS2021	Control Enclosure	EPCS	Not Started	0%	1.0w	1.0w	20-Dec-19	30-Dec-19	11-Dec-19	17-Dec-19	1.4w																										
SS2023	Transformer Installation (Owner Furnished)	Owner	Not Started	0%	2.0w	2.0w	05-Nov-19	18-Nov-19	05-Nov-19	18-Nov-19	0.0w																										
SS2023.5	Remobilize after Winter	EPCS	Not Started	0%	0.0w	0.0w	13-Apr-20		31-Mar-20		1.8w																										
SS2024.1	Install Capacitor Bank and DVAR	EPCS	Not Started	0%	2.0w	2.0w			15-Apr-20	28-Apr-20																											
SS2024.2	Above Grade Grounding & Conduit	EPCS	Not Started	0%	2.0w	2.0w	13-Apr-20	24-Apr-20	31-Mar-20	13-Apr-20	1.8w																										
SS2025	Rigid Bus & Jumpers	EPCS	Not Started	0%	3.0w	3.0w	13-Apr-20	01-May-20	31-Mar-20	20-Apr-20	1.8w																										
SS2026	Pull and Terminate Cables	EPCS	Not Started	0%	4.0w	4.0w	27-Apr-20	22-May-20	14-Apr-20	11-May-20	1.8w																										
SS2027	Apparatus Testing	EPCS	Not Started	0%	3.8w	3.8w	26-May-20	08-Jun-20	12-May-20	08-Jun-20	1.8w																										
SS2027.5	Testing and Commissioning (Prioritize ISO, Utility)	EPCS	Not Started	0%	2.0w	2.0w	09-Jun-20	22-Jun-20	09-Jun-20	22-Jun-20	0.0w																										
SS2027.6	Substation Mechanical Completion/Ready to Energize	EPCS	Not Started	0%	0.0w	0.0w			22-Jun-20	22-Jun-20	0.0w																										
SS2027.7	Substation Energization	Owner	Not Started	0%	0.0w	0.0w			08-Jul-20	08-Jul-20	-0.2w																										
SS2027.9	Substation Substantially Complete	EPCS	Not Started	0%	0.0w	0.0w			30-Jul-20	30-Jul-20	0.0w																										

█ Remaining Level of Effort
 █ Primary Baseline
 █ Remaining ...
█ Actual Level of Effort
 █ Actual Work
 █ Critical Rem...