



**MERRICOURT SUBSTATION**  
**EPCS/ECI MONTHLY PROJECT STATUS REPORT**

**DATE February 6, 2020**

**1. SAFETY**

- a. Safety orientation are 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. Barricade any open excavations.
  - iv. Make sure you keep warm and get warmed up as needed.
- c. There have been no recordable incidents this month.

<b>Project Name: <u>Merricourt Substation Project</u></b>	
<b>Location: <u>McIntosh County, ND</u></b>	
<b>Major "EPC" Contractor: <u>Wanzek</u></b>	
<b>Turbine Supplier: NA</b>	
<b>EPCS Monthly Man Hours</b>	
<b>January Hours</b>	<b>TOTALS:</b>
Number of Monthly MAN HOURS (break-down needed):	527.00
EPCS Substation Construction Manager (Site Grading Strata)	177.00
Dakota Fence	
Renew Energy (Substation)	50.00
Interstate Surveying	
Terracon Testing	
FirstMark Foundations	
EPCS Testing	
Pro Energy	300.00
Thein Movers	
° 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):	527.00
Number of hours worked (Previous Months):	5988.50
<b>Total Hours Worked on the Project:</b>	<b>6515.50</b>

## **2. MERRICOURT SUBSTATION ENGINEERING**

### **a. Substation Design Drawings:**

#### **i. Physical design**

1. Shunt reactor addition below grade package was issued for construction on November 26, 2019.
2. Initial scope (minus shunt reactor) above grade package was issued for construction on December 4, 2019.
3. Shunt reactor addition above grade package was issued for review on December 6, 2019.
4. . Gen-Tie package was issued for construction on January 9, 2020.

#### **ii. Electrical design**

1. 90% design package was submitted for review on January 13, 2020. Comments from EDF and OTP were received on January 24th.
2. Package is expected to be issued for construction by the end of this week.

## **3. MERRICOURT SUBSTATION SCADA:**

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

## **4. MERRICOURT SUBSTATION STUDIES:**

### **a. Insulation Coordination**

- i. Revised study was issued for EDF review on November 19, 2019. Approval was received on January 24th.
- ii. Study is being revised to include shunt reactor bay and is planned to be re-issued for EDF review by end of this week

### **b. Reactive Power Study**

- i. Report was stamped and issued for record on December 2, 2019.

### **c. Short Circuit Analysis**

- i. Initial study was submitted for EDF review on June 19, 2019. Comments were received on July 10<sup>th</sup>.
- ii. Next version of the study is being worked on and is expect to be issued for EDF by end of next week.

### **d. Substation Ground Grid Analysis**

- i. Study was stamped and issued for record on November 26, 2019.

### **e. Harmonic**

- i. In progress. Expect to have the initial study completed middle of February.

### **f. Lightning & Switching Overvoltage**

- i. Not applicable for this project due to short line length.

### **g. Transient Overvoltage**

- i. In progress. Expect to have the initial study completed by the end of February.

### **h. Transient Analysis**

- i. No update at this time. It is on our list to complete but do not have a timeline at this point.

- i. Relay Settings
  - i. Line settings were approved January 31, 2020.
  - ii. Remainder of relay settings expected to be issued by end of this week.
- j. Arc Flash
  - i. Initial arc flash expected to be available 4 weeks after relay settings

**5. MERRICOURT SUBSTATION MATERIALS**

- a. Material Status:
  - i. Major equipment has been ordered.
  - ii. Equipment is starting to show up to site.
  - iii. Misc. materials are on order and scheduled to arrive as needed for the project.

**6. MERRICOURT SUBSTATION CONSTRUCTION**

- a. Contractor Staffing:
  - i. EPC Services Company: 0
  - ii. Site work : 0
  - iii. Foundations: 0
  - iv. Electrical: 0
  - v. Total: 0
- b. Construction Activities:
  - i. Work at the site has been stopped due to winter conditions
  - ii. The electrical contractor Renew is possibly going to be on site in mid-February to install the panels and wire from the panels to the Termination Cabinet.
  - iii. The transformer installation was done by others.
- c. Progress to Date:

i. Site Work	95%
ii. Foundations	100%
iii. Fence	90%
iv. Below Grade work	50%
v. Steel Structures	50%
vi. Electrical Equipment	40%
vii. Control Building	95%
viii. Control Panels	0%
ix. Bus Work	0%
x. Control Cable and Terms	0%
xi. Finish Rock	0%
xii. Testing	0%

**7. LANDOWNER & LOCAL COMMUNITY ISSUES & LOCAL SPEND:  
(Decembers #'s)**

- a. Contractors
  - i. Approximately \$24,610
- b. Materials
  - i. Approximately \$78,800

**MERRICOURT SUBSTATION PROJECT**

Monthly Status Report

Page 4

- c. Living Expense
  - i. Motels - Approximately \$13,910
  - ii. Meals - Approximately \$4,550
  - iii. Gas - Approximately \$12,175
- d. **Total Spending \$134,545**

**8. MERRICOURT SUBSTATION RECENT PROJECT PHOTOS:** (Decembers Pics)



**MERRICOURT SUBSTATION PROJECT**

*Monthly Status Report*

*Page 5*

