



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

**DATE March 5, 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>February Hours</b>	<b>TOTALS:</b>
<b>Number of Monthly MAN HOURS (break-down needed):</b>	0.00
<b>EPCS Substation Construction Manager</b>	
<b>(Site Grading Strata)</b>	
<b>Dakota Fence</b>	
<b>Renew Energy (Substation)</b>	
<b>Interstate Surveying</b>	
<b>Terracon Testing</b>	
<b>FirstMark Foundations</b>	
<b>EPCS Testing</b>	
<b>Pro Energy</b>	
<b>Thein Movers</b>	
<b>° EDF Site Rep. TEAM (if applicable)</b>	
<b>EPCS Project RIR to date:</b>	0
<b>EPCS Project DART to date:</b>	0
<b>EPCS Project SR to date:</b>	0
<b>EPCS Project FR to date:</b>	0
<b>Fatalities:</b>	0
<b>EPCS First Aid Only:</b>	0
<b>EPCS Near Miss/Good Catch:</b>	0
<b>EPCS Property Damage:</b>	0
<b>Recordable w/NO LOST DAYS:</b>	0
<b>Recordable w/LOST DAYS:</b>	0
<b>Number of DAYS LOST:</b>	0
<b>Number of hours worked (MONTH):</b>	0.00
<b>Number of hours worked (Previous Months):</b>	6515.50
<b>Total Hours Worked on the Project:</b>	6515.50

## **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 construction on December 20, 2019.
4. Gen-Tie package was issued for construction on January 9, 2020.
5. DVAR final design outstanding and working with AMSC to complete the MV cable run.

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

1. Electrical design was issued for construction on February 5, 2020.
2. DVAR final design outstanding and working with AMSC to complete this update.

## **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. Report was stamped and issued for record on February 28, 2020.

### **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. Report was updated and issued for EDF review of February 28, 2020.

### **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 by the end of March.

### **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 March.

### **h. Transient Analysis**

- i. Initial version of this study is expected to be issued for review the week of March 30<sup>th</sup>.

### **i. Relay Settings**

- i. All relay settings have been issued for review and comments provided by OTP & EDF. We will work with EDF & OTP this week or next to ensure coordination is acceptable.

- j. Arc Flash
  - i. Initial arc flash expected to be available the end of March.

**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 work is expected to start back up March 24<sup>th</sup>. The work will start with the work in the control enclosure, including battery installation, panel installation, and inter panel/YTC wiring.
  - 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
- c. Living Expense
  - i. Motels - Approximately \$13,910
  - ii. Meals - Approximately \$4,550

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- iii. Gas - Approximately \$12,175
- d. **Total Spending \$134,545**

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