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April 5, 2024

Chad Troumbly  
Electric Distribution Manager  
Grand Rapids Public Utilities  
Grand Rapids, MN

**Re: Scope of Work dated April 5, 2024  
Substation Operations & Maintenance Agreement between Grand Rapids Public Utilities and  
MINNESOTA POWER dated December 19, 2018, Section 1 (b) – Non-Routine Maintenance,  
Repair, Replacement, or Upgrades.**

Dear Chad,

Minnesota Power (MP) is pleased to provide the following Scope of Work with Grand Rapids Public Utilities for a battery replacement project at the Grand Rapids Substation located at 709 Walter Ave, La Prairie, MN which will be scheduled for summer of 2024. The batteries have reached their 20-year end of life, and it is highly recommended they be replaced for reliability purposes. Upon completion of the project, Grand Rapids Public Utilities agrees to pay Minnesota Power for time, removal, installation & cost of equipment required for the project. MP will also provide Professional Engineering oversight for all construction design work required to complete the scope as defined.

Scope of work is as follows:

1. Removals
  - a. Remove and dispose of 60 lead acid battery cells.
  - b. Remove and dispose of battery charger.
  - c. Remove and dispose of battery cell mounting rack and battery acid containment system.
  - d. Remove and dispose of power cables, control cables, and other equipment.
2. Physical Electrical
  - a. Install new battery cell rack with integrated containment system.
  - b. Install new 58 cell 125 VDC battery with required intercell connections and copper connection cables to existing DC distribution panel.
  - c. Install new maintaining battery charger along with control, monitoring, and power cables.
3. Perform required tests on new battery system to include test discharge and charge, integrity test of all connections.

Based on the project information provided by MP's Substation Engineering Team, the initial cost estimate\* for the project are approximately \$44,000. A breakdown of costs is provided in **Attachment A** below. A detailed Substation Engineering project scope document will also be provided for reference.

*\*The attached cost estimate are estimates only, actual time and material costs may differ and are subject to change.*



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If you agree to this scope of work, please sign below authorizing the scope of work as listed above.

**Grand Rapids Public Utilities**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



## Attachment A

### Project Cost Estimate

#### 1. Material and parts

a. 58 cell, utility grade storage battery	\$12,000
b. Battery charger/maintainer 125 VDC, 25 amp	\$7,900
c. Battery rack, two step, seismic zone 0	\$1,800
d. Spill containment tray with neutralizing pillows	\$3,400
e. Flip top flame arresters, each battery cell	\$1,500
f. Fuse box, power fuse, power cables, intercell connectors, control cable	<u>\$3000</u>
g. Sub-total	\$29,600

#### 2. Construction Scope

a. Temporary battery trailer, labor, equipment	\$9600
b. Minnesota Power engineering, planning, drafting, project management	\$4800
c. Subtotal	<u>\$14,400</u>

#### **Total Estimated Cost**

**\$44,000**