Eaton Three-Phase Lithium Battery Preventive Maintenance
Scope of Work
Attachment R-39

Battery Maintenance of Battery Equipment includes, and is expressly limited to, those tasks set forth below. Due to the size and type of battery, testing and work procedures vary between battery manufacturers; work procedures may vary by UPS, applicability, and battery type and may be limited by safety requirements. This SOW does not cover any parts. All additional work will be billable at the applicable rates per Attachment X-1.

Performed During Each Preventive Maintenance Visit:

1. **Measure and Record the following:**
    a. Validate battery cabinet breaker is on/ closed
    b. Individual cell/battery float voltages and overall float voltage
    c. Charger output current and voltage
    d. AC ripple current and voltage imposed on the battery
    e. Download the data from the Battery Management System for analysis and archiving.
    f. Ambient temperature/ Humidity and ventilation status; verify all are within operational range

2. **Visually inspect conditions and appearance of the following:**
    a. Connection terminals inter cell/battery connectors, cables and associated hardware
    b. Cell/battery covers, containers, and post seals; noting any excessive distortion
    c. Battery racks or cabinets and associated components and hardware for structural integrity
    d. Check for latched and/ or historical alarms/faults
    e. Inspect cleanliness / corrosion of batteries, cabinet, rack and area
    f. Battery Management System operation and functionality
    g. Interface Control circuit verifications

3. **Lithium Communicator Module (LCM), if under Flex contract coverage**
    a. Inspect and verify LCM data logging, functional test and integration to lithium battery cabinet(s)
    b. Download LCM data for storage in Eaton cloud application for customer reporting

4. **Performed Once Per Calendar Year:**
    a. The yearly maintenance procedure should include all the above with the addition of the following:
    b. Visually inspect the Battery System for any signs of damaged, loose or worn cables, pinched wires, etc. and replace as necessary
    c. Visually inspect each module connection bolt for indications of excessive heat
    d. Re-torque system level bus bar and/or cable connections.
    e. Re-torque module to module bus bars and/or cables according to manufacturer guidelines
    f. Verify communication cables are securely connected.
    g. Verify Auxiliary power sources are present and viable.

5. **Report for Each Preventive Maintenance Visit:**

a. The technician(s) will issue the customer a verbal report summarizing the condition of the battery and identifying any critical issues before leaving the customer's site
b. A formal report containing all readings and observations will be sent to the customer within five business days.