



# Preventive Maintenance Service for Lithium-ion Batteries

## Statement of Work

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Prepared by Critical Power & Cooling Services  
Scope: On-demand Services

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## 1.0 Executive Summary

The Preventive Maintenance Service for Lithium-ion Batteries provides a comprehensive inspection of the battery system enabling optimum battery life and system performance. This service includes all labor and travel expenses with a 7x24 scheduling upgrade option, including weekends and holidays. Parts and replacement batteries are not included.

The Preventive Maintenance Service for Lithium-ion Batteries can be purchased stand-alone or in conjunction with any service agreement from Schneider Electric Services.

## 2.0 Features & Benefits

Features	Benefits
<b>Includes Labor and Travel Expenses</b>	Provide service budgeting stability - fixed cost.
<b>Highly Skilled Personnel</b>	Help your system operate to manufacturer's specifications.
<b>Proactive Maintenance</b>	Support for peak battery functionality based on manufacturer's specifications.
<b>Environmental inspection</b>	Help enable the viability and performance of the battery system with the inspection of the surrounding environment.
<b>Flexible Scheduling Options</b>	Support Customer's varying business requirements with flexible service scheduling options.
<b>Site Report</b>	Provide a battery system assessment and recommendations to help enable optimum availability and battery runtime.
<b>EcoStruxure IT Free <sup>(1,2)</sup></b>	<p>EcoStruxure IT Free brings “<i>you</i>” visibility into your critical data center equipment. Get access to your IT physical infrastructure inventory at anytime from anywhere and understand the overall health of your connected equipment from any device.</p> <p>EcoStruxure IT Free consists of a software gateway, a mobile app, a cloud-based account to store your data and a web interface to visualize your data.</p> <p>EcoStruxure IT is complimentary for all Schneider Electric Customers and is also the base platform for EcoStruxure Asset Advisor (remote monitoring service) and EcoStruxure IT Expert (monitoring software).</p>

<sup>(1)</sup> EcoStruxure IT Free is only available on networked equipment or if there is a management device.

<sup>(2)</sup> Geographical restrictions apply. Please verify availability with your local Schneider Electric Field Services Representative.

## 3.0 Details of Service

### 3.1 Preventive Maintenance Service for Lithium-ion Batteries - Service Deliverables

The Preventive Maintenance Service for Lithium-ion Batteries provides qualified Schneider Electric Services personnel at the Customer's location on a pre-determined scheduled date. The following table lists the details of the service tasks provided with this visit.

Service Deliverables	
Activities	Description
Visual Inspection	Inspect the integrity of the battery rack or cabinet.
	Check the terminal posts and connectors for evidence of heat damage.
Environmental Inspection	Measure and record the ambient air temperature of the battery module.
	Check the general appearance and cleanliness of the battery system.
Torque Inspection	Check the hardware torque of 100% of the battery connectors to manufacturer's specifications during the service.
Functional Verification	Verify and record the following thanks to the Battery Management System access: <ul style="list-style-type: none"> <li>- Temperature of each module;</li> <li>- Voltage of each cell in each module;</li> <li>- State of charge of each cell;</li> <li>- State of health for each module;</li> <li>- Review max/min and avg. temp for each module; and</li> <li>- Review max/min and avg. current of each module.</li> </ul>
	Perform optional battery monitor capacity test from the UPS and log voltages, current and temperature.
Report Delivery	Delivery of a comprehensive site report to the Customer including any information on the battery system that is not functioning as expected and providing recommendations on the corrective actions. A trend analysis of the recorded data (battery and environment) will be also included.

### 3.2 EcoStruxure IT Free & the Remote Monitoring Solutions – Service Deliverables

Customers buying the “Preventive Maintenance Service for Lithium-ion Batteries” have access to EcoStruxure IT Free.

EcoStruxure IT Free is a modern cloud platform that connects the devices supplied by Schneider Electric and other vendors <sup>(3)</sup> to the cloud for instant access from anywhere.

The connection to EcoStruxure Asset Advisor for secure power & cooling is done through EcoStruxure IT Gateway (free downloadable software, available also as a hardware appliance, sold separately). Data transmission is out-bound only, using safe, industry standard protocols for the connection. The local gateway encrypts all data, before sending it to the cloud account where is available to be accessed by the Customer through a web interface or a mobile app. Once the asset is connected, the Customer can see and organize the asset and its information, like serial number, product name, etc.

### 3.3 Upgrading to EcoStruxure Asset Advisor for secure power & cooling or EcoStruxure IT Expert

When the asset is connected, the Customer has the option to upgrade to two different remote monitoring service & software solutions:

- EcoStruxure Asset Advisor for secure power & cooling: cloud-enabled remote monitoring service by the Connected Services Hub**

Thanks to EcoStruxure Asset Advisor for secure power & cooling, a dedicated team in Schneider Electric will monitor your critical power infrastructure 24/7, managing or troubleshooting any incident from start to end; and
- EcoStruxure IT Expert: cloud-enabled remote monitoring software by Customer or Partner**

EcoStruxure IT Expert, cloud-based vendor agnostic software, provides you with full wherever-you-go visibility of your IT physical infrastructure and proactive recommendations on how to improve its performance thanks to big-data analysis. You can use it by yourself or with your preferred partner.

The specific activities of the EcoStruxure Asset Advisor for secure power & cooling service are listed below:

Activities	Description
<b>Alarms and Live Data on EcoStruxure IT app</b>	Always connected to “your” physical infrastructure, showing live sensor data and device details directly on your mobile.
<b>24/7 Remote Monitoring</b>	Schneider Electric will remotely monitor all connected physical infrastructure devices 24 hours a day, 7 days a week, 365 days a year.
<b>Alarm Notification</b>	Schneider Electric will provide immediate notification (based on network latency and polling intervals) via phone, and/or message via EcoStruxure IT app, with specific recommendations, enabling a timely and informed choice of action during critical incidents.
<b>Monthly Report Delivery</b>	Schneider Electric will deliver a regular report with key metrics on connected devices, including incidents and alarms and current and expected lifespan for the physical infrastructure.

For more information EcoStruxure Asset Advisor, please visit [www.se.com/asset-advisor](http://www.se.com/asset-advisor).

# 4.0 Assumptions & Exclusions

## 4.1 Assumptions

The successful performance of the tasks defined in this Statement of Work is based on the following key assumptions, which are agreed to by Schneider Electric Services.

### 4.1.1 Time, People & Location <sup>(4)</sup>

- The system must be installed in an environment that adheres to manufacturer specifications;
- Services performed on site by Schneider Electric Field Services will be executed during Schneider Electric business hours unless otherwise requested by the Customer. Those hours are Monday through Friday from 8am to 5pm weekly, local time, unless otherwise specified;
- All services are performed on site by qualified Schneider Electric Services personnel;
- Hours of Operation for Technical Support are Country specific and include either 24/7 or business hours coverage;
- Next-Business-Day is defined as the next day during the business week and normal business hours;
- Response time is defined as elapsed time between when Schneider Electric Services technical support determines an on-site visit is necessary and the time the Field Services Representative arrives at the Customer's site. Please verify the service coverage and response time for your location with your local Schneider Electric Services sales representative;
- Schneider Electric will provide Services with respect to equipment and assets that are inside the Service Area. "*Schneider Electric Services Area*" means a location that is within (i) one hundred (100) miles or one hundred and sixty (160) kilometers radius of a Schneider Electric Services' location; and (ii) the country in which the Installation site is located, unless otherwise defined in the governing agreement with Schneider Electric, in which case the definition in the governing agreement prevails;
- Geographical restrictions may apply. Some aspects of the service definition presented in this document may vary by location. In the case of a conflict between the service definitions contained in this Statement of Work and the local service definitions will prevail. For more information, please refer to your Schneider Electric Services sales representative; and
- This service applies to a Customer location with standard site and product access. Our services assume continuous uninterrupted and unobstructed access to the equipment, standby time may be chargeable.

### 4.1.2 Services Activities & Upgrades

- Preventive Maintenance upgrades to 24/7 are available. On-site response upgrades to 8-hour 24/7 or 4-hour are available. The 4-hour on-site response upgrade may not be available in all locations, please check with your local Schneider Electric service sales representative or reseller for availability;
- Where next-business-day, 4-hour or 8-hour services are available for purchase, qualified personnel will arrive on site within 4-hour or 8-hour or next-business-day from the time Schneider Electric Services Technical Support deems an on-site visit is necessary;
- The complete preventive maintenance check implies that the system is placed in maintenance bypass.
- Services obtained from any Schneider Electric partner or reseller are governed solely by the agreement between the purchaser and the reseller. That agreement may provide terms that are the same as the Schneider Electric Services Solutions on this document. Please contact the reseller or the local Schneider Electric sales representative for additional information on Schneider Electric Services Solutions on Products obtained from a reseller;
- Schneider Electric Field Services will define with the Customer the best approach to find a solution and reserves the right not to execute any modification outside of its defined scope of responsibility;

<sup>(4)</sup> All assumptions that refer to reaching a location within a certain time are subject to local variations. Please contact your local Schneider Electric Services sales representative for further information.

- The end user is responsible for ensuring that one staff member is always on duty, available to be contacted for an incident;
- The end user is responsible for putting all prerequisites in place to enable their devices to be connected to EcoStruxure Asset Advisor for secure power & cooling;
- All UPS & cooling systems require an installed Network Management Card (NMC);
- EcoStruxure Asset Advisor for secure power & cooling, cloud-enabled remote monitoring service, is not available in all locations. Please consult with your local Schneider Electric Services sales representative for availability in your area;
- EcoStruxure Asset Advisor for secure power & cooling refers only to a remote monitoring service;
- The Terms and Conditions of EcoStruxure Asset Advisor for secure power & cooling are available [here](#).
- The connection to EcoStruxure Asset Advisor for secure power & cooling is done through EcoStruxure IT Gateway (free downloadable software, available also as a hardware appliance, sold separately);
- EcoStruxure Asset Advisor for secure power & cooling is only available if EcoStruxure IT is installed and configured accurately;
- EcoStruxure IT mobile app must be installed and enrolled at this [link](#) to activate the cloud-enabled remote monitoring service; and
- EcoStruxure Asset Advisor for secure power & cooling is operational once the Customer is contacted and validated by the Connected Services Hub, remote monitoring team.

## 4.2 Exclusions

Any items not expressly included in this offer for the Services will be subject to a specific quotation from Schneider Electric and will be charged in addition subject to agreement with the Customer. This includes, for instance, but is not limited to:

### *4.2.1 Additional Scope of Work not expressly included in the order/contract*

- Safety officer or security escort charges;
- Costs and charges associated with switching and isolation operations;
- Additional type test, test or FAT with reports or other reports outside the Schneider Electric standards; or any specialized testing and commissioning;
- Repair of damage caused by abuse, misuse, improper storage conditions, lack of maintenance, maintenance not in accordance with Schneider Electric/the manufacturer's instructions, non-compliance with Schneider Electric instructions for installation or energizing, mechanical, electrical or electronic overload or other events outside Schneider Electric's control;
- Replacement or repair work resulting from normal wear-and-tear of equipment, damage or accidents owing to insufficient monitoring of the equipment or use that is non-compliant with the purpose of the equipment and/or Schneider Electric/the manufacturer's instruction;
- Cabling or wiring external to equipment;
- In case of cabling problem, or wrong phase rotation, Schneider Electric Field Services will not carry out any rework on the cabling;
- Software programming and configuration, including EcoStruxure IT Gateway;
- Process design, civil and other mechanical works;
- Consumables, additional spare parts, cables or other materials and related labor and travel costs (e.g.: batteries, wearing parts, including, but not limited to, capacitors and fans);
- Supply or installation of additional equipment or raw material required to perform and related labor costs (site busbar, cabling, generators, lifts, testing kit, lift, crane, ladder, containment and cable glands, including connection to site ground, unless specifically detailed as included);



- Removal and disposal of legacy equipment;
- Support for third-party equipment;
- Intervention in a different location than planned;
- Adaptations required due to insufficient nature of, or error in, the information sent by the Customer, a change to the location of the equipment or its environment;
- All on-site support dispatch service, resulting from EcoStruxure Asset Advisor for secure power & cooling remote monitoring service are governed by a dedicated Statement of Work which is not included in this Statement of Work and will be charged following our standard pricing list. Please refer to your Schneider Electric Services sales representative for more information;
- Equipment not provided by Schneider Electric Services. Examples include, but are not limited to:
  - Third-party components;
  - Switchgear;
  - Information Technology (IT) Equipment;
- Installation activities not provided by Schneider Electric Services as part of this service include, but are not limited to:
  - System installation;
  - Battery assembly;
  - Information Technology (IT) Equipment migration services; and
  - Specialized testing or commissioning services.

#### *4.2.2 Additional time or fee not planned to access or exit from Customer site*

- Delay in gaining access to or obtaining work permits for the utility substation or other aspects of the site;
- Delays incurred due to compliance with exceptional background check requirements or due to required medical or drug tests;
- Additional health and safety, environmental or security requirements at the Customer's site which were not previously agreed to Schneider Electric;
- Induction, Safety or Cybersecurity training longer than planned;
- Access to final on-site destination longer than 30 minutes from gate to the equipment; and
- Delays related to IT (no camera, no laptop, format disk after mission).

#### *4.2.3 Stand by time/Waiting Time more than 30 minutes unless caused by Schneider Electric*

- Unavailability of Customer or its third-parties required for the performance of the services;
- Unavailability of equipment, tools, hardware, software, internet connectivity, or office space required for the performance of the services;
- Cancellation or postponement of the services by the Customer (unless in accordance with the contract with Schneider Electric); and
- Delay or unavailability of transport either when not organized by Schneider Electric or outside of Schneider Electric's control.

#### *4.2.4 Extra working hours not included in order/contract*

- Schedule modification or acceleration plan requested by the Customer;
- Additional expenses (accommodation, catering and transportation);
- Delay in decisions and approvals by the Customer; and
- Delay or unavailability of accurate and complete information as requested by Schneider Electric.

#### *4.2.5 Other circumstances that increase the time or costs of performing*

- Other events or circumstances outside of Schneider Electric's reasonable control which increase the time or costs of performing the services.

Please contact your local Schneider Electric Services sales representative for clarification.

***COVID-19: The company reserves the right to amend, withdraw or otherwise alter this submission without penalty or charge as a result of any event beyond its control arising from or due to the current COVID-19 pandemic or events subsequent to this pandemic, including changes in laws, regulations, bylaws, or direction from a competent authority.***

## 5.0 Scope of Responsibility

The items stated here are responsibilities of both Schneider Electric Services and the Customer.

### 5.1 Schneider Electric Services Responsibilities

- Schedule qualified and approved personnel to perform services;
- Meet the pre-determined scheduled service date;
- Perform all the Preventive Maintenance Services' activities listed in this Statement of Work;
- Perform services to manufacturer specifications.
- Conform to local health and safety regulations;
- Meet manufacturer and Customer safety requirements;
- Inform and provide recommendations to the Customer about any action items not included in this Statement of Work;
- As part of the Preventive Maintenance Services for Lithium-ion Batteries:
  - Operate system in different modes of operation;
  - Identify and document open Schneider Electric Services and/or Customer issues; and
  - Provide a signed copy of the Preventive Maintenance Services for Lithium-ion Batteries site and maintenance forms to the Customer.

### 5.2 Customer Responsibilities

- Prior to order, inform Schneider Electric Services Sales of any special site conditions that could prohibit the successful execution of this standardized service, i.e., security clearance, site access requirements, unions, no truck access, no loading dock, no elevator access, no inside moving equipment available, etc.; Once agreed upon with Schneider Electric Services Sales, acceptable special site conditions must be clearly identified on the customer Purchase Order;
- Provide dates and times when the scheduled work can be performed;
- Provide Schneider Electric with 5 business days' notice of any required reschedule;
- Facilitate site access for Schneider Electric Services personnel;
- Provide a suitable path within the building to relocate the components from the dock to the UPS system location.
- Provide a suitable location for the staging of the old components nearby the UPS system location.
- If possible, allow the use of customer on site moving equipment, such as, moving dolly, two wheeled truck, pallet jack, etc.
- Provide a named resource for scheduling of the services;
- Notify Schneider Electric Services personnel of any security clearance and/or safety training and equipment requirements in advance of arrival;
- Ensure safety plan is in place prior to intervention;
- Set-up EcoStruxure IT Free and maintain the contact list on the web profile;
- Provide a point of contact during time of service;
- Provide a point of contact at the completion of service to sign off on completed work;
- Provide the name of the project manager (if applicable);
- Have the parties responsible for operation of the equipment present for basic operator training after the system start-up; and
- Schneider Electric will make multiple attempts to proactively contact the Customer to schedule maintenance services due. However, it is finally the Customer's responsibility to ensure all services due are scheduled in advance of contract expiration.

## 6.0 Project Work Details

The project work details listed below are provided by Schneider Electric Services for the Customer with regard to services date, place and completion criteria.

### 6.1 Schedule

Actual set dates will be discussed and approved between Schneider Electric Services and the Customer.

### 6.2 Location

The location of this service will be on-site and will be agreed to by Schneider Electric Services and the Customer prior to the service delivery.

### 6.3 Completion Criteria

Schneider Electric Services is expected to have finished its written duties when any of the following occurs:

1. Schneider Electric Services completes all the tasks described in Section 3.1 of this Statement of Work document; and
2. This service and Statement of Work are terminated for other reasons within the Service Customer Agreement.

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