



# On Site Preventive Maintenance on Power Quality Mitigation Solutions

## Statement of Work

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Prepared by Schneider Electric Services  
Scope: Maintenance Services

[se.com/services](https://se.com/services)

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Electric

## Table des matières

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## 1.0 Executive Summary

On Site Preventive Maintenance on Power Quality Mitigation Solutions is a service performed by Schneider Electric qualified Experts.

The aim of the offer is to:

- Provide a manufacturer maintenance
- check the state of the equipment before the intervention
- check the proper environmental and operating conditions of the equipment
- interpret alarms and events, if any and export controller's log or self-check files
- advice on parts replacement based on projected service life or operating conditions
- assess equipment lifecycle status and maintenance operations level
- provide data analytics based on technical specifications or local measurements
- perform a functional verification and check the required service is provided
- provide a maintenance report with recommendations including recurring or adaptative further maintenance schedule

As a trusted partner who is deeply knowledgeable in electrical distribution installed base equipment, Schneider Electric provides a status of lifecycle and condition of electrical distribution assets and a plan to mitigate the risks identified.

## 2.0 Features & Benefits

This offer is part of a global workflow process including pre and post maintenance result analysis and sustainability solution proposal.

The following table lists the details of the service tasks to be provided.

Features	Benefits
<b>Assets and System Recommendations</b>	<ul style="list-style-type: none"> <li>• maintenance costs optimisation</li> <li>• minimised risk of failure</li> <li>• consumables replacement</li> <li>• required performance verification</li> </ul>
<b>Assets and System Recommendations</b>	Help to prevent from overheating and loss of performance caused by lack of maintenance or filter cleansing
	Help to prevent asset life reduction caused by harmonic current circulation, general overloads or environmental conditions out of recommended range
<b>Deliverables &amp; Recommendations</b>	<p>Provide a comprehensive maintenance report on the product, including the following:</p> <ul style="list-style-type: none"> <li>• visual inspection</li> <li>• Product controller event log verification and historian</li> <li>• components performance status, when applicable</li> <li>• functional verification and performance checks</li> <li>• Recommendations for a Modernization plan, if needed</li> <li>• Recommendations for spare parts replacement schedule</li> <li>• lifecycle span of the assets.</li> </ul>
<b>Highly Trained Operators</b>	Help assure the assessment is delivered effectively and with valuable findings.
<b>Web Portal</b>	Support the implementation of the assessment's recommendations, access to your installed base information and maintenance's deliverables, request for further technical support.

### 3.0 Details of Service

The specific features and deliverables of this service are listed below. For each item listed, Schneider Electric Services qualified consultant’s personnel will perform the work described and create a printed document summarizing the results.

Service Deliverables	
Activities	Description
<b>Network Information</b>	<ul style="list-style-type: none"> <li>• Single Line Diagram : simple diagram of the system (include our unit and customer’s load) clear to understand, the diagram can be drawn by hand if convenience.</li> <li>• Upstream transformer nameplate, capacity (VA), impedance ratio (%)</li> <li>• AccuSine unit installed position, with part number and serial number.</li> <li>• Indicate if AccuSine unit is single / connected in parallel or hybrid?</li> <li>• Mark faulty unit in the Single Line Diagram.</li> <li>• Are there capacitors / capacitors banks present downstream of the AccuSine CT connection?</li> <li>• What’s the PT’s connection to the AccuSine unit, where is the PT’s position, what’s PT’s ratio.</li> <li>• How do the CTs connect to our unit, where is the CT’s position (source side / load side).</li> <li>• What is the CT’s ratio, CT’s direction, and CT’s rating</li> </ul>
<b>PQ devices Information</b>	<ul style="list-style-type: none"> <li>• The event log and waveforms files (if available) for all units and serial number</li> <li>• Details of environment where the product is installed. Dust / Temp / Humidity etc. images and small videos, Compare the temperature with HMI measurement.</li> <li>• Complete visual inspection to the entire units and the PCBs inside the unit</li> </ul>
<b>Scope</b>	<ul style="list-style-type: none"> <li>• Check for any abnormalities observed at the Electrical network when the incident occurred, try to collect Power data logs, if available at customer meter/EMS.</li> <li>• Login at controller interface, and take snap/video each page in below items: System Status, System Settings, Unit Settings</li> <li>• Manufacturer maintenance check list</li> <li>• Metering Performance HMI Screen snap/video with product ON and OFF condition.</li> <li>• Harmonic analyzer bar graph(V12, Iload1, Isrc1) in Waveforms HMI Screen snap/video with product ON and OFF condition (active harmonic filters only).</li> </ul> <p>The scope is related to electrical distribution assets and system with the following equipment:</p> <ul style="list-style-type: none"> <li>• Capacitor banks and power factor correction units</li> <li>• Active Harmonic Filters</li> </ul>
<b>Evaluation</b>	<p>Product compliance with manufacturer specification</p> <p>Product compliance with site requirements</p>
<b>Point(s) of Measurement Selection</b>	<p>Check the state of the equipment before the maintenance (visual inspection).</p> <p>Check there is enough space available to work in a safe workspace</p> <p>Prepare the risk assessment and help secure the temporary maintenance area.</p> <p>Prepare the pre-report summary, with the test conditions, site description and controlled quantities.</p>

<p><b>Access and Security Checks</b></p>	<p>Check that the Engineer has the required authorization to access the active parts of the panels from the Customer before starting the intervention. access to all necessary site locations and facility documentations safe workspace</p>
<p><b>Maintenance Report</b></p>	<p>A detailed report of findings with actionable next steps is delivered. The report includes:</p> <ul style="list-style-type: none"> <li>• Overview of maintenance scope;</li> <li>• Description of the system before the maintenance and operating conditions;</li> <li>• System technical findings/deficiencies, if any</li> <li>• Life cycle status of the product(s) and Modernization Plan (<i>covering existing PQ solutions &amp; associated meters only</i>), if necessary:             <ul style="list-style-type: none"> <li>○ Equipment lifecycle status (Obsolescence); and</li> <li>○ Equipment upgrades - retrofit/replacement/ extension plan;</li> <li>○ Performance of the current system;</li> </ul> </li> <li>• Recommended list of Spare Parts;</li> <li>• Maintenance periodicity adaptation based on environmental condition and manufacturer recommendation; and</li> <li>• Conclusions:</li> </ul>
<p><b>Excluded Services</b></p>	<p>fire suppression physical security structural analysis repair of damage due to abuse, misuse, lack of maintenance any specialized testing trouble shooting of wrong installation</p>

## 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>(3)</sup>

- The installation at the site has been done by Schneider Electric. If not, then Schneider Electric will evaluate the installation before signing the contract;
- 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 consultant 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

- 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; and
- The end user is responsible for ensuring that one staff member is always on duty, available to be contacted for an incident.

<sup>(1)</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.

## 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;
- Physical security;
- Fire detection and fire suppression;
- Structural analysis;
- Circuit Tracing / Fault tree analysis;
- Stress & Reliability analysis;
- Repair of damage due to abuse, misuse, lack of maintenance or other damage caused by outside forces;
- Any oil sample analysis (transformers);
- On site condition maintenance;
- Costs and charges associated with switching and isolation operations;
- Any specialized testing;
- Additional type test, test or FAT with reports or other reports outside the Schneider Electric standards; or any specialized testing and commissioning;
- Low voltage sub-distribution panels;
- Electrical generators and end-user equipment such as: motors, pumps, etc.;
- Communication, Automation, and Control equipment/system;
- HVAC and Building Management Systems;
- Repair of damage caused by abuse, misuse, improper storage conditions, lack of maintenance, maintenance not in accordance with Schneider Electric's/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's/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;
- 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;
- 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 consultant personnel to perform services;
- Meet the pre-determined scheduled service date;
- Perform all on-site service tasks in accordance to this Statement of Work;
- Perform services to manufacturer's specifications and conform to local health and safety regulations;
- Meet manufacturer and Customer safety requirements;
- Submit site forms, documentation/report to the Customer;
- Ensure all action items described in this Statement of Work are completed;
- Inform and provide recommendations to the Customer about any action items not included in this Statement of Work;
- As part of the EcoConsult Audit for Power Quality Advanced service:
  - Identify and document open Schneider Electric Services and/or Customer problems; and
  - Provide a signed copy of the activities' report 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 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;
- 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.

## 6.2 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 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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