Electrical Distribution Service Statement of Work

MPS Enterprise Assessment

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1 Executive summary

The purpose of this document is to define the conditions for Schneider Electric Services offering **for Modernization, Performance, and Safety (MPS) Enterprise assessment** under which the service required by the customer will be performed by Schneider Electric Consultants on customer premises.

MPS Enterprise is a multi-week non-intrusive assessment of the installed base of electrical equipment. The aim of the offer is to assess:

- Strengths and weaknesses of the installation
- Condition of the equipment
- Risks to safety and electrical distribution performance
- Major risks to the process
- Solutions to manage the risks and optimize performance

Priorities are clearly identified within a framework built on four plans:

- Maintenance plan: to keep the installation running
- Modernization plan: to manage equipment obsolescence and performance improvement
- Monitoring plan: to monitor risks in terms of availability, power quality, and energy costs
- Management plan: to ensure the safety of people, follow up on the performance of the installation, and competency management

The MPS Enterprise assessment is delivered by leveraging a powerful modelling platform which allows Schneider Electric to deliver a high level of technical value. The smart, server-side technologies provide deep visibility into the health of critical systems.

2. Features and benefits

Features	Benefits
General	Improve the reliability and safety of your Electrical Distribution (ED).
Scheduling	Executed quickly and efficiently within two to three weeks on site.

Global Consistency	Our MPS Consulting offers are centrally managed with globally consistent tools, techniques, training, templates, and project management (when applicable).
Highly Trained Electrical Consultants	Assures the assessment is delivered effectively, consistently, and with findings that are valuable.
Proprietary tools	Consultants utilize a Schneider Electric professional installed base diagnostic platform powered by a world-class database of installed base knowledge to secure the excellence, consistency, and value of our assessments.

3. Details of service

The site visit (Assessment) provides up to three Schneider Electric consultants at the customer's location on a pre-determined scheduled date. The following table lists the details of the service tasks provided with this assessment.

Activities	Description
Scope	The scope is related to electrical distribution. The main equipment within the scope is: • Medium voltage switchboards/breakers (including protection relays) • MV/MV & MV/LV transformers • Main LV power switchboards/breakers • Capacitor banks and power factor correction units
Network architecture reliability analysis	Reliability analysis evaluates the topology/architecture of the electrical distribution system based on the "fault tree" approach. Equipment failure modes and failure rate values are chosen as per the IEEE Std. 493-1997 (IEEE Recommended Practice for the Design of Reliable Industrial and Commercial Power Systems). Equipment repair time values will be chosen as per the IEEE Std. 493-1997 and be adjusted as per customer maintenance policy and spares & spare-parts management program.
Evaluation of equipment stress level	• Obsolescence • Physical condition • Environmental conditions (temperature, presence of dust, air humidity, etc.) • Operating conditions (overload condition, number of switching operations, harmonics level, spare-parts, etc.)
Assessment of procedures and policies	• Safety • Emergency planning • Maintenance • Switching and operation • Contract management • Information systems • Training • Technical documentation
Computer modeling	• System reliability calculations

	• Equipment stress calculations • Equipment criticality calculations • Obsolescence analysis results • Criticality-based maintenance schedule

Final Report	A detailed report of findings with actionable next steps is delivered on site on the last day of the site visit. The report will contain:
	• Overview of study methodology
	• Description of process critical activities/critical loads and electrical distribution system
	• System technical findings/deficiencies
	• Equipment stress assessment
	• Reliability analysis, assumptions and results
	• Equipment criticality assessment
	• Maintenance Plan
	  • Assessment of existing maintenance plan
	  • Issues identified after a review of the current schedule and documentation
	  • Proposed criticality-based maintenance plan
	• Modernization Plan
	  • Equipment lifecycle status (Obsolescence)
	  • Equipment upgrade needs - retrofit/replacement plan
	  • Proposed modifications of electrical system topology/architecture to improve reliability
	• Monitoring Plan
	  • Assessment of existing monitoring system
	  • Proposed comprehensive monitoring system
	• Management Plan
	  • Assessment of existing management plan
	  • Recommended list of spare parts
	  • Proposed management plan
	• Conclusions
	  • A listing of findings and actions that are prioritized according to investment level and risk level

4. Assumptions & exclusion

4.1 Assumptions

The successful performance of the tasks defined in this Statement of Work (SOW) is based on the following key assumptions:

- All services performed on-site by Schneider Electric Field Service will be executed during the Schneider Electric business hours unless otherwise requested by the customer. These hours are Monday through Friday from 8am to 5pm weekly, local time, unless other specified.
- All services are performed on-site by a certified Schneider Electric Field Service Representative (FSR).
- This service applies to a customer location with standard site and product access.

- Geographical restrictions may apply. Please verify the service coverage and response time for your location with your Schneider Electric sales representative.
- The installation at the site has been done by Schneider Electric. IF NOT, then Schneider Electric will evaluate the installation before signing the contract.
- In case of a conflict between the service definitions contained on this Statement of Work and the local service definitions, the local service definitions will prevail. For more information, please refer to your Schneider Electric sales representative.

4.2 Exclusions

The following items are outside the scope of this standard service offering. They can be integrated into a customized Statement of Work (SOW) at request of the customer. Please refer to your local Schneider Electric Services Sales Representative or reseller.

- Fire detection and fire suppression
- Physical security
- Structural analysis
- Repair of damage due to abuse, misuse, lack of maintenance or other damage caused by outside forces
- Any specialized testing
- Any oil sample analysis (transformers)
- On-Site condition maintenance

The items listed below are not included in the MPS Enterprise assessment scope.

- 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