Transmission and distribution service level agreements

Electrical installation expertise at your fingertips

Answers for energy.
Siemens is a world leader in transmission and distribution products, equipment, and solutions. The unparalleled, long-standing expertise and practical experience from one of the largest installed bases worldwide, form the basis of Siemens’ service level agreements (SLAs). From technical support and remote diagnostics to operation and maintenance, even when third-party assets are in scope, SLAs offer tailor-made solutions, drawn up with extreme flexibility in close partnership with Siemens’ customers. The benefits are utmost reliability with optimal asset maintenance. Moreover, the Siemens experts are happy to share their knowledge, thus keeping customer staff up-to-date with the latest trends and know-how.

Transmission and distribution service level agreements: the right service for the right electrical installation

Making sure that all electrical installations within a power grid comply with applicable standards and requirements in terms of operation and reliability is a precondition for reliable and efficient operation. Operational risks to electrical systems, whether new assets or existing ones, can thus be avoided, and the entire system can be kept up and running long-term. This also ensures good power quality and efficient operation.

Today’s rising electricity demand, the drive for cleaner energy, and liberalized markets mean that both new and existing equipment need to be used efficiently, to keep new capacity investment as low as possible. Optimizing transmission and distribution using service level agreements is the key to ensuring that electrical installations, old and new, however big or small, remain profitable, whatever their location.
Our approach:
A continuous process using asset data for power system improvement. All steps can be contracted with an SLA.
Siemens is able to provide modular SLAs with high economies of scale that generate value added. A combination of several service modules can provide additional technical and financial benefits:

- Reliable determination of asset condition based on audits, monitoring, and diagnostics
- All-round system maintenance, including proactive maintenance, reactive maintenance, and condition-based maintenance
- Quick response to customer queries by Siemens’ technical experts

A basic transmission and distribution SLA allows increased system availability by ensuring that information on the condition of assets is always available. More modules can be added as needed any time.

An all-inclusive transmission and distribution SLA features comprehensive modules together with maintenance services, remote services, and operation and maintenance. These flexible, vertically integrated, and tailor-made service level agreement packages can be applied across the entire system spectrum, from single assets to entire power grids, preventive maintenance to remote services, short-term contracts to long-term agreements, shared services to grid responsibility and even grid operation, and grid design to system renovation.

Availability of services may vary, depending on the region.
Service implementation
Siemens assists its customers in the maintenance of their assets by working together with the customers’ employees, assessing the current situation with them to identify internal service needs, and to select the right service modules accordingly. SLAs equip asset managers with the means of facing the challenges of today, reaching their KPIs and retaining valuable knowledge and expertise within their organizations.

Shared services
Cooperation between Siemens and customers’ staff is an ideal means of knowledge transfer right on the job. In the framework of shared services, customer staff are therefore trained during maintenance procedures and learn how to perform more and more service tasks themselves. Over the years, the Siemens experts may take on the role of supervisors offering expert advice during maintenance operations performed by customer staff.

Your benefits at a glance
- Improved maintenance budget planning
- Prioritized support
- Direct access to expert knowledge
- Flexible service levels according to individual requirements
- SLA implementation flexibly adapted to the specific service strategy
- Valuable knowledge transfer from the Siemens experts through shared services
SLAs comprise a wide variety of modules that ensure optimal asset performance throughout the entire life cycle.

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<th>Pre-delivery services</th>
<th>Standard services</th>
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<td>Precise planning and proper installation of equipment are key to flawless grid function. The pre-delivery services module ensures that assets are installed properly, by supervising certification procedures and assisting employees with trainings in becoming familiar with the new asset. This contributes significantly to the optimal use of resources and helps ensure the flexibility needed for continuous success.</td>
<td>Standard services packages offer the benefits of technical support and expertise of a world leader in transmission and distribution technology. Standard services packages comprise a site acceptance test at commissioning, warranty service, expert support provided by the Siemens Energy Customer Support Center, and a condition assessment.</td>
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**Warranty**

The Siemens warranty becomes valid as soon as the asset has been delivered, right after the site acceptance test performed by a local Siemens representative, who is able to answer all manner of questions about the asset.

**Siemens Energy Customer Support Center**

The Siemens Energy Customer Support Center is also available to standard service customers. Open twenty-four hours a day, seven days a week, it assists customers in finding solutions relating to installation, equipment, software, etc. The Siemens Energy Customer Support Center locates the ideal specialist to deal with the query, making valuable expertise available to its customers, at all times.

**Condition assessment with SAFE asset audits**

A further valuable element of standard services packages is a condition assessment with asset audit. It enables a comprehensive assessment of the asset in question and includes:

- objective and transparent asset condition information
- recommendations for improved environmental sustainability.
Technical support

Technical support modules are the first level of additional services within the SLA framework. They can also be integrated into a shared services concept for expanding and retaining technical knowledge within the customer’s organization.

A technical support module specifies agreed response times to questions submitted and defines technical support availability rates, should the need for more hands-on assistance arise. The technical support modules feature

- round the clock specialist availability
- on-call duty.

**Round-the-clock specialist availability**

This support service renders peace of mind as it guarantees

- back-up support for customers’ operational staff
- immediate contact with the manufacturer’s experts
- support when internal staff are absent
- short response times.

All key documentation is archived at Siemens to ensure an informed response by Siemens technical experts, so the current configuration of your assets can be retrieved and examined at all times. This means clearer communication and highly effective problem solving.

**On-call duty**

The on-call service provides on-site support at any time in the event of emergency situations that cannot be solved by telephone support. Siemens field engineers are available on call within agreed response times, even at night.

Spare part services

Spare parts service modules are an integral part of effective asset maintenance. The modules feature a spare part delivery service and spare part management.

**Spare part delivery service**

Spare parts on stock are vulnerable to degeneration, which makes immediate spare parts acquisition a preferable alternative to in-house stocking. Siemens spare parts are delivered as new where required within minimal response times.

**Spare part management**

Extensive inspection and assessment are the key to keeping stocked spare parts up-to-date. Siemens provides stock management advice on which parts are needed, and the quantities involved.
A framework agreement on maintenance provides total flexibility to order maintenance and repairs within the quickest response time available.

Assessment and inspection of electrical power supply
In the run-up to assessment and inspection, the Siemens experts and the customer jointly decide where to focus. Emphasis may be put on prioritization of where to perform maintenance first or on identifying particular risks for the reliability of the assets. A review of the maintenance strategy or an independent opinion about the state of the assets are other typical focuses.

Using comprehensive audit tools, Siemens guarantees structured, comparable, and independent assessments and inspections.

Maintenance
Based on individual maintenance schedules or on assessment and inspection findings, maintenance operations are planned to ensure the reliability of the system. Thanks to the company’s strong local presence around the globe, Siemens is able to provide maintenance and ensure the utmost system reliability and availability worldwide.

Performance of switching operations
If local regulations allow, Siemens performs switching operations based on customers’ commands. Whether switching is required for repairs or maintenance, the Siemens experts are trained to follow the customer’s switching commands according to local and customer-specific regulations.

Repairs
When repairs happen randomly, the reliability of the power supply is in danger or fails. The repair service module comprises predefined procedures that start on the customer’s command, and the Siemens experts provide proper solutions within the shortest possible time.

Remote services modules are based on Integrated Substation Condition Monitoring (ISCM) and the Siemens remote diagnostic center. The modules are available as a stand-alone SLA or as modules within larger service packages. They deliver all relevant information for decision-making from a single source and features
- data privacy and security
- implementation without affecting the asset’s primary functions or SCADA system
- optimum use of the existing infrastructure
- key data availability for optimized decision-making.

ISCM – Integrated Substation Condition Monitoring
ISCM utilizes online asset data to minimize unplanned repairs and maintenance. Assets can be exploited maximally without jeopardizing reliability.
Siemens ISCM monitors the most critical assets for reliability, such as:
- transformers
- GIS
- overhead lines
- circuit breakers
- cables
- surge arresters.

ISCM enables quick and effective responses to problems that usually remain undetected in conventional protection systems as soon as they emerge.

ISCM also enables assets to be operated at a real-time rate. Delivered with knowledge modules, ISCM complies with IEC and ANSI regulations and can also include above-standard detection based on Siemens long-standing field experience in fault detection.

Depending on the automation already installed, ISCM can be implemented on existing or on dedicated new hardware, or it can be hosted at the Siemens remote diagnostic center.

Remote diagnostics
The Siemens remote diagnostic center combines the strength of both centralized expert knowledge for effective asset and network analysis and localized network knowledge for daily operation. It provides condition monitoring, SCADA supervision and operation, and asset management consultancy.

The remote diagnostic center is equipped to operate transmission and distribution equipment used in fields such as wind farms, HVDC, local grids, or power generation, to mention just a few.

Since there is no need to connect ISCM to an existing control and protection system, data privacy is always guaranteed, if condition data is synchronized with the remote diagnostic center. When the automated knowledge module detects a critical situation, the experts will perform an extensive detailed analysis of the situation and recommend an optimum solution accordingly.

Operation and maintenance
With the establishment of service level agreements on the availability of assets, substations or grids, the key elements of our operation and maintenance services are tailored to each specific situation. They include:
- management of scheduled and emergency switching operation
- consultation in case of network disturbances
- update-info service
- network studies
- customized operation and maintenance services.