

Integrated DERMS Solution

Realize distributed energy benefits through intelligent management

DERMS enables utilities with a scalable solution to optimize distributed energy resources

From customer to control center

Siemens' Integrated Distributed Energy Resource Management System (DERMS) Solution provides utilities with a flexible and scalable solution to effectively engage with customers, manage and optimize distributed energy resources and automate business processes.

Siemens' Integrated DERMS Solution provides utilities and energy aggregators with the cutting-edge tools and capabilities to ensure that growing DER challenges are met.

Comprehensive DERMS portfolio

Siemens provides an integrated and comprehensive portfolio of software and hardware needed for managing the modern two-way grid and enabling distributed energy resource (DER) grid capabilities. A few highlights:

Planning and Impact Analysis (PSS®SINCAL)

Evaluates network capacity to support DERs and integrate T&D planning efforts with operations decisions.

Control center (Spectrum Power™)

Provides visibility of the entire system state with the goal of reliable network operation and efficient economic optimization given current network constraints with the onset of DER.

Customer-centric applications (EnergyIP®)

Creates the ability to define, aggregate, forecast, settle and control customer-owned DER installations within your service territory.

Renewable Integration and control (SICAM RI)

The ideal solution for local monitoring and control, acting as an intelligent RTU for utility-owned distributed energy.

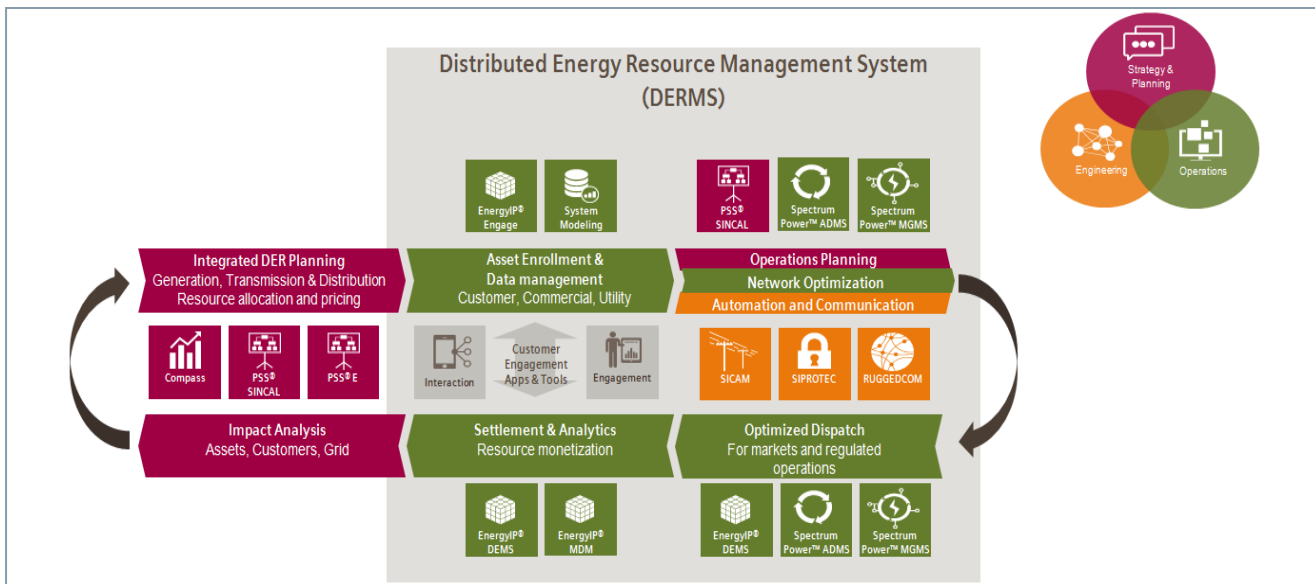


Figure 1: Siemens End-to-End DER Solution: Plan, Enable, and Optimally Manage

Value proposition

DERMS solutions are becoming a critical tool to address safety and reliability challenges brought on by the influx of distributed generation and demand response resources onto the grid. By enabling intelligent DER integration, and helping to realize DER benefits such as investment deferral and development of ancillary market services, DERMS brings strong value to utilities and energy aggregators.

Enhance safety and reliability

Improve system reliability and outage restoration while supporting increasing levels of DERs and two-way flow of energy on the network. Develop a comprehensive solution to increase automation, communication, and analytic capabilities with better data management processes.

Enable DER integration and adoption

Support customer technology and service choices. Provide transparent, actionable information on available capacity and benefits in specific locations to optimize economics and improve integrated planning efforts.

Realize DER benefits

Enable functionality to obtain value from DERs by deferring traditional infrastructure investments, and facilitate new value drivers through the development of wholesale and distribution grid services.

The solution

Siemens provides a comprehensive approach to address utility planning, communications, and operations with our DERMS solution portfolio. Working with your specific challenges, we tailor solutions that fit your needs and will

lead you into the future of energy management.

Planning

Utilize increased amounts of field data to analyze past, current and future network models to make accurate decisions about future infrastructure needs and incorporate the effects and expectations of DERs into operational decisions.

Communication

Leverage timely field data from substations and DERs to enable analysis and decision-making at operational and planning levels.

Operations

Provide operators with essential tools to obtain situational awareness and manage the real-time distribution system. Siemens' DERMS leverages our Spectrum Power™ Advanced Distribution Management System (ADMS) to expand the value of distributed energy resources for customer and grid benefit through the following capabilities:

- Model controllable loads (such as demand response), single-phase and three-phase DERs, including solar PV units, wind turbines, energy storage systems, and other generation sources like microgrids
- Aggregate the DERs at different levels going all the way to individual resources. Control signals for DERs from overarching systems like EMS or Independent System Operator (ISO) can also be implemented via DERMS
- Manage grid resources to enable fast outage response

- DER generation forecasting
- DER optimization (economic and network)

Utilities can integrate DERMS capabilities with demand response (DRMS) and Distribution Management Systems (DMS) for real-time grid management and operations

To learn how Siemens can tailor a solution for your utility or energy aggregator needs, contact us at smartgrid.energy@siemens.com.

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