

Oracle Grid DERMS

A Comprehensive Solution for Grid Modernization Projects

Oracle Grid DERMS empowers utilities to seamlessly integrate and optimize distributed energy resources (DERs)—both utility-scale and customer owned. Designed for real-time visibility and control, it enables efficient management of Behind-the-Meter (BTM) and Front-of-the-meter (FTM) assets such as solar PV, electric vehicles, wind turbines, and battery energy storage systems (BESSs). With Oracle Grid DERMS, utilities can address grid constraints, enhance reliability, and unlock market potential through intelligent optimization and control.

Unified Network Model

Oracle Grid DERMS utilizes a unified network model, integrated with Oracle OMS and ADMS, to streamline deployment and accelerate operational readiness.

From a single, real-time network model display operators gain comprehensive situational awareness of all the distribution assets including DERs.



Key capabilities:

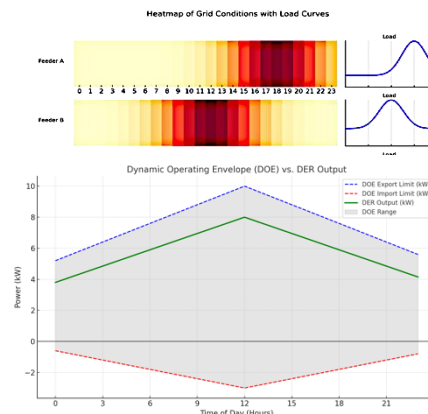
- Seamless integration with Oracle DMS
- Model various DER technologies for power flow analysis
- Group DERs by type, user-defined categories, and network hierarchy
- Forecast DERs' output for real-time and study mode
- Optimize DER cost within operational constraints
- Enhance Grid Reliability—reduce voltage and loading violations events and enhances stability

Intelligent Grid Constraints Management

Designed for continuous adaptation of network changes, Oracle Grid DERMS dynamically adjusts DER settings and schedules to tackle challenges like overloads, backfeeds, and voltage violations. Its **advanced optimization engine** ensures a reliable grid and optimum power flow. Its calculations take into account forecasted grid conditions as well as third-party DERs' schedules and limits to generate real-time and day-ahead schedules for FTM DERs.

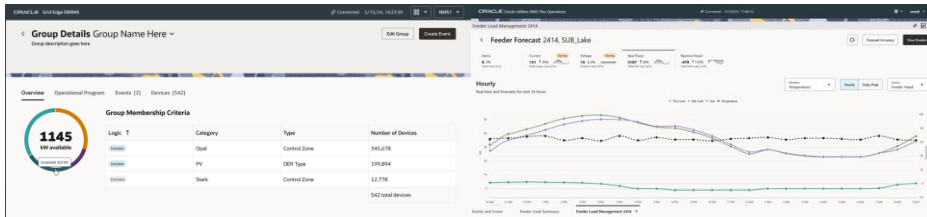
Network Capacity Allocation

Oracle Grid DERMS calculates real-time operation limits for FTM DERs to prevent constraints violations and ensure their safe operation. Oracle plans to incorporate **Dynamic Operating Envelopes (DOE)** to enable aggregators and Edge DERMS to be active market participants and align with grid needs while avoiding operational conflicts.



Flexible Aggregation for Market Participation and Ancillary Grid Services – In Progress

Oracle Grid DERMS empowers utilities to unlock new opportunities in energy markets by aggregating FTM DERs into Virtual Power Plants (VPPs). These VPPs enable active participation and enhance grid flexibility. By Seamlessly integrating with Generation Management Systems (GMSs) via ICCP, Oracle Grid DERMS supports ancillary grid services for efficient and reliable grid operations.



Why Choose Oracle Grid DERMS?

- **Comprehensive Visibility of DERs:** Gain a single-pane-of-glass view into DER operations and market participations.
- **Enhanced Grid Reliability:** Optimize grid stability through intelligent aggregation and dispatch of DERs.
- **Seamless market Integration:** Unlock new revenue streams by enabling DERs to actively participate in energy markets.
- **Future-Ready Technology:** Designed to support the evolving needs of modern grids with DERs.
- **Proven Expertise:** Backed by Oracle’s unparalleled experience in energy solutions and innovation.

Transform your grid today with Oracle Grid DERMS – the future of digital grid management starts here.

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Key Use Cases:

- Prevent overloading and backfeed of transformers or feeders during high-generation events
- Calculate DOE to enable BTM DERs and VPP in energy markets
- Support transmission system operation with aggregated FTM DER resources
- Safely handle additional generation resources during periods of low generation and curtail DER output to prevent overloading transformers or feeders during high-generation periods

Related Solutions:

- Oracle Utilities Network Management System
- Oracle Utilities Distributed Energy Resource Management System
- Oracle Utilities Live Energy Connect
- Oracle Utilities Analytics