CGI OpenGrid DERMS

Distributed Energy Resource Management Solution

Utilities are now confronting the most transformational period of change. The pervasive adoption of Distributed Energy Resources (DER) is driving the need to reevaluate how they manage their network infrastructure.

Coping with renewable generation

The decarbonisation of the energy system and the high penetration of DERs quickly transform the landscape of distribution grids. Navigating towards a stable, secure, and resilient distribution system will require significant investment in grid assets and greater insights to address the impact of integrating DERs on the network.

While diverse resources with different characteristics, constraints, and technologies are actively connecting to the grid, the direction of power flow is changing and will introduce new challenges to network protection, forecasting, planning, power resiliency, and more:

- Lack of control and visibility over independently-owned assets operating on the grid.
- Inconsistent implementations of integration protocols and communication standards to facilitate monitoring and control.
- Inability to support the complete customer engagement, settlement, and billing life cycle.
- Insufficient optimisation of DER usage to improve network reliability and performance and minimise carbon usage.

Accelerating holistic orchestration and transactive energy

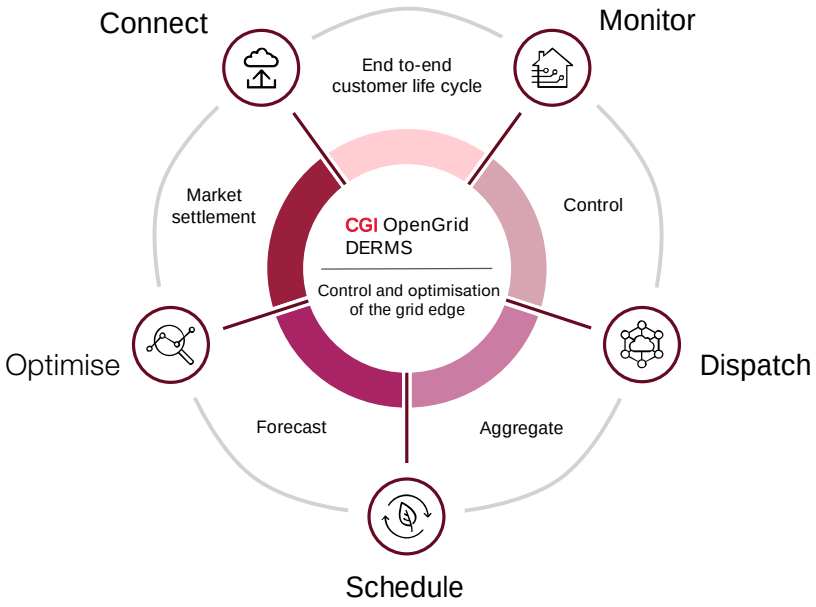
CGI OpenGrid DERMS

To accommodate the growing expectations of prosumers participating in the energy ecosystem, CGI OpenGrid DERMS is built on a network model to help utilities orchestrate and regulate their DERs for enhanced reliability, network efficiency, and grid performance.

Features and capabilities

- Digital Twin of the distribution network
- Registration and interconnection of DERs
- Visibility of the control and command capabilities of non-utility owned assets
- Customer/contract lifecycle management
- DER aggregation
- Automated and manual dispatching of DERs
- DER scheduling based on operator priorities
- DER performance optimisation
- Analytics and visualisation to gain insights into DER performance and impacts
- Market settlement

CGI OpenGrid360



Connect

Independently-owned DERs are registered, validated, and connected with the existing network assets to provide a holistic view of power production and consumption across the service territory.

Monitor

Performance of connected DERs are monitored and key data such as power, Volt-Var, and voltage are visualised and aggregated by the transformer and feeder.

Dispatch

Dispatch of constraints and commands can be performed manually, scheduled based on date and time, automatically triggered based on events, or imported from external systems.

Schedule

Priority scheduling of dispatches based on various allocation profiles that include fault proximity, connection agreement, financial goals to command control equitably, and curtailment dispatches across the available DERs.

Optimise

Network optimisation allows utilities to improve forecasting of power demand and manage resource capacity to meet that demand. By equipping network operations with additional insight, utilities gain accurate visibility and control of devices operating on the grid edge while simultaneously meeting demand and minimising reserves traditionally needed to meet in-day fluctuations.

Intelligently and safely manage and control a variety of DERs to successfully transform challenges into operational and financial benefits.

About CGI

Insights you can act on

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world.

We are insights-driven and outcomes-based to help accelerate returns on your investments. Across hundreds of locations worldwide, we provide comprehensive, scalable and sustainable IT and business consulting services that are informed globally and delivered locally.

For more information
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