A TRUE DISTRIBUTED ENERGY RESOURCE MANAGEMENT SYSTEM (DERMS)

Flexible, dynamic, compliant and secure to equip the grid of the future

Distributed energy resources (DERs) are paving the way for a renewable grid. However, more DERs bring more challenges for utility providers, and most existing systems fail to offer the rapid control necessary to ensure stability on the grid. When combined with distributed generation and storage and the need for increased security and compliance, it's clear that utility providers need a new kind of grid management system.

With PXiSE, a true comprehensive DERMS solution is finally here.

Comprehensive DERMS Solution

PXiSE offers the simplest and most effective way to:

- Manage various DER and traditional distribution assets
- Provide enhanced situational awareness, visualization and analytics
- Remotely communicate with and control DERs quickly and securely
- Mitigate intermittency and coordination challenges by optimizing the energy mix
- Ensure quality, cost-effective power, regardless of DER mix or system distribution
- Easily integrate and adapt to third-party VPP and aggregators
- Enable ancillary services

Secure and Compliant

In addition to reliability and safety, security plays a vital role in all PXiSE solutions.

From design to delivery to ongoing operation, PXiSE ensures that appropriate security programs are in place for both physical and cyber threats and/or attacks.

- Complies with the 2019 IEEE 2030.5 standards
- Meets the Smart Electric Power Alliance DERMS requirements
- Role-based authentication and multi-factor authorization to meet compliance needs

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PXiSE ADVANCED GRID SOLUTIONS FIELD EXAMPLE:

Large Utility Company Selects PXiSE as its DERMS Provider

Having access to reliable electricity is critical, and that's especially challenging for customers in remote locations. A sparse number of customers spread across a wide territory also presents challenges, as infrastructure costs can be high and power must travel considerable distances.

For this power company to meet its dispersed client needs and offer cost-effective power, they created a vast network of isolated systems using microgrids in conjunction with battery storage. However, microgrids are complex in nature, and lack of coordination can lead to blackouts, subpar power quality and an overall poor customer experience.

To maintain stability in the grid while incorporating Distributed Energy Resources (DERs) and continuing to meet customer expectations, the utility provider needed a Distributed Energy Resource Management System (DERMS) that would optimize the grid both now and in the future.

For the company, that meant embarking on a journey to find an automated DERMS solution to optimize and control tens of thousands of DERs. After a thorough search, the company selected the PXiSE DERMS solution.

Given the number of DERs in the provider's network, speed and flexibility were critical requirements for a grid control solution. PXiSE operates the speed of a customer's electric system, allowing for dynamic control to ensure a consistent power supply, even as the energy resource mix changes. Not only that, its hierarchical nature enables communication efficiency across the network. With a multi-tier network, thousands of DERs will report real-time measured values to headquarters while receiving external commands. For efficiency purposes, control is decentralized to each microgrid.

With PXiSE, the utility found the DERMS solution of the future that enables grid stability and a reliable power supply for some of the country's most remote customers.