



Distributed Energy Resource Management Systems (DERMS)

Distributed energy resources (DERs) currently represent the single most significant factor impacting the planning, operation, and maintenance of distribution systems. With the advent of inverter-based DERs and the increase of penetration levels in many parts of the country, these resources can either act as a threat or an opportunity to the utility industry. We provide new grid-support and market-engagement services dependent on the level of preparedness. DER management systems (DERMS) enable aggregation, visibility, and management of DERs, while also acting as a fundamental building block in the strategy towards DER integration. This provides utilities with tools for success – deriving value from these assets while improving customer satisfaction.

DER Management Systems (DERMS)

Distributed energy resource (DER) management systems (DERMS) integrate front-of-the meter (FTM) and behind-the-meter (BTM) DERs into distribution operations. This operational technology enables aggregation, visualization, and management of DERs to improve integration with other applications, maintain system reliability, and enable provision of grid services at the distribution or system level. This technology impacts the entire distribution business, starting from the DER interconnection process and through to operational reporting and customer engagement.

Quanta Technology supports the utility and solution providers with the following service offerings:

DERMS Strategy

- DER technology roadmapping
- Use-case development
- Architecture development and migration strategy considering legacy systems
- Business-case and rate-case support

Design and Analysis

- DER dynamic hosting capacity analysis
- DER interconnection process review and support for DERMS integration
- Specification of business, technical, and non-technical requirements
- Enterprise and market integration

Owner's Engineer

- Request for Proposal (RFP) support and solution evaluation
- Design and engineering of DERMS deployment projects
- Development of test strategy and test plans
- Integration and testing, including implementation of custom-design field automation controllers for DER communications and controls

Operation and Maintenance

- Operational data review and reporting
- Measurement and verifications (M&V) of system performance
- Historian data quality assessment and data analysis
- Optimization of DERMS configuration
- Maintenance strategy

DERMS

Aggregation



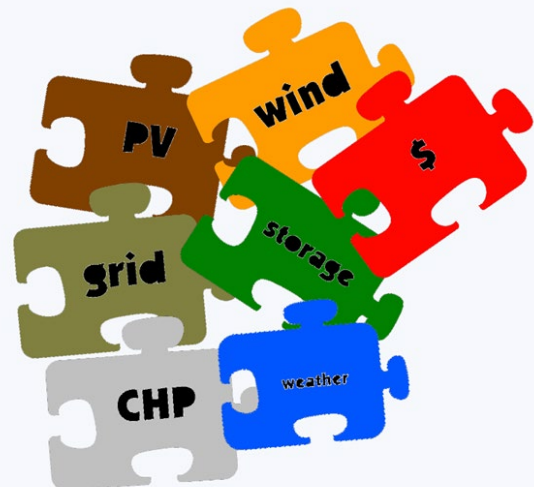
Control & Monitoring



Optimization



Performance Evaluation





Why Quanta Technology?

The distributed energy resource management system (DERMS) resides at the core of our grid modernization strategy. It is important to note that DER impacts almost all facets of distribution planning and operational business, which Quanta Technology has spent over a decade helping utilities navigate. We have a team of industry experts and thought leaders equipped to help plan, justify, select, and integrate DERMS solutions to be scalable and expandable as integration of DER continues and technology evolves.

Grid Modernization

With DER forming one of the main technology pillars of the modern grid, DERMS sits at the heart of grid modernization strategies. Quanta Technology has extensive experience in each of the subdomains, understanding how pieces fit together and providing strategic guidance to utility customers. Quanta Technology partners with utilities to ensure technology, people, and processes help DERMS become an integral part of grid modernization.

DERMS Integration

Quanta Technology has partnered with utilities as an extension of their engineering team in order to aid the integration of new operational systems. Prior to transition to production systems, we have often performed extensive testing at either the vendor, customer, or Quanta Technology facilities. Quanta Technology adapts its testing and integration strategy to each utility context to fit the service needed.

DERMS Optimization

Quanta Technology supports the DERMS owner as the production systems evolve with the addition of DERs. Operational data reviews, planning studies to update configurations, and collaborative development of O&M strategy for DERMS help future-proof the investment.



About Quanta Technology

Quanta Technology is an independent technology, consulting, and testing company providing business and technical expertise, along with advanced methodologies and processes, to utilities and others in the power and energy industries. Our mission is to provide unparalleled value to our clients in every engagement across the value chain by using advanced software and hardware, laboratories, and custom tools for a holistic approach to practical service and the most insightful thought leadership in the industry.

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