EnergyHub

# Mercury DERMS Platform

## Mercury gives utilities real-time visibility into DERs and greater control at the grid edge

### Mercury DERMS capabilities

- Peak reduction
- Load shift
- Solar shifting and firming
- Voltage & frequency response
- Rate optimization

## Control at the grid edge

Utilities across the country are experiencing challenges in integrating, monitoring, aggregating, and controlling devices at the grid edge. The combination of utility- and consumer-owned DERs – nearly all of which will be network-connected – will create a new level of complexity for the grid and many more opportunities for grid management. In order to derive value from these resources, utilities require a software solution that manages the enormous complexity of decision-making across a diverse portfolio of DERs.

Communicating with, controlling, and optimizing the performance of DERs requires an end-to-end software system that is integral to a utility's day-to-day operations. Utilities need a DERMS that can:

- Create situational awareness at the grid edge
- Engage with customers and enroll DERs into programs
- Monitor and forecast DER activity in relation to grid operations
- Coordinate control/dispatch of resources for grid-support services

## Manage DERs from a single hub

Employing real-time analytics and dynamic visualizations, EnergyHub's Mercury DERMS is uniquely equipped to provide the suite of solutions utilities need to monitor and manage a range of connected and aggregated devices – including smart inverters, battery energy storage systems, smart thermostats, grid-interactive water heaters, and electric vehicles.



### Largest device ecosystem

Mercury boasts the widest DER device and manufacturer ecosystem. This breadth of device integrations allows for a streamlined and painless process for standing up utility DER management programs. Classes of DERs connected to Mercury include smart inverters, stationary batteries, electric vehicle supply equipment, grid-interactive water heaters, and smart thermostats.

### Intuitive interface

Mercury provides an easy-to-use software interface, designed from the perspective of distribution operators and engineers. A dashboard provides real-time information to the operator through dynamic visualizations and summary statistics, allowing the operator to monitor all DERs on the grid and make informed control decisions. Mercury also simplifies the process of enrolling new customers and DERs into utility programs, maximizing program effectiveness.

### Powerful analytics engine

Mercury can manage DERs to simultaneously provide multiple grid-support services. The Mercury DERMS assesses the complex tradeoffs between competing grid priorities in order to achieve an optimal control strategy. Mercury achieves this goal by stacking utility services in an optimal fashion across a range of time and locations and controls the DER fleet to achieve these stacked objectives.

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# Key Features of the Mercury DERMS

Designed for utilities to manage utility-owned DERs, or enroll customer- owned DERs as grid assets, the Mercury DERMS offers a scalable, reliable, and proven solution for utilities.



## Enrollment

Onboard utility- and customer-owned residential, commercial and industrial DERs into programs using utility-branded enrollment modules and automated enrollment verification – minimizing the utility's administrative burden in resource formation.

## Monitoring

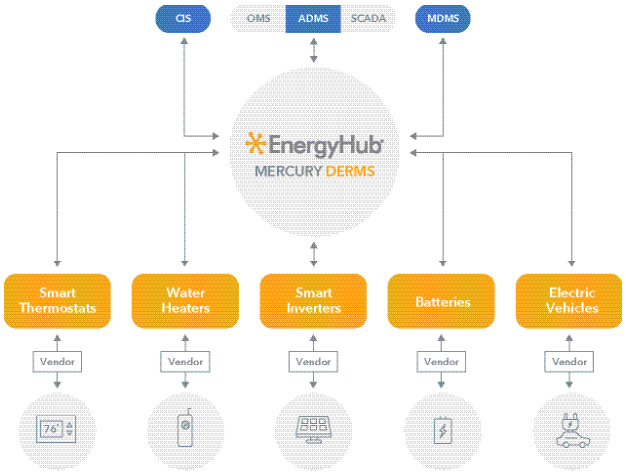
Generate insights on fleet-wide performance and localized generation/consumption effects in targeted service areas. Develop customized device aggregations, such as location within distribution network hierarchy, or proximity to key grid infrastructure and equipment, to allow for localized provision of grid services.

## Fleet Optimization

Manage the complexity of balancing multiple grid-support services through dispatch automation and optimization. Proactively forecast and schedule DER production and consumption, and react to real-time grid-support requests. Use advanced machine learning to identify characteristic load, production, and voltage profiles to inform targeted system planning and operations.

## Measurement & Verification

Track and visualize key performance metrics for grid-support events and services by tracking co-optimized DER performance against baseline scenarios.




## Integration and communication

Mercury integrates seamlessly with existing utility data architectures – including CIS, MDMS, and ADMS – and supports multiple communication protocols, such as OpenADR, IEEE 2030.5 (SEP 2.0), DNP3, as well as proprietary APIs.

For more information, visit **www.energyhub.com/solutions.**


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