

FLEX BL Maximizing DER integration while keeping the grid safe

EcoStruxure[™] DERMS



Industry challenges

Driving utilities to adopt the future

As climate challenges directly influence the ways we consume and produce energy, the net zero pledges that many countries have made for 2050 are reshaping the landscape of the utility business. The ongoing efforts towards decarbonization are driving a significant rise in renewable energy sources integrated into the distribution grid. Furthermore, the widespread adoption of electric vehicles and growing trends of self-consumption are transforming the conventional consumers into prosumers.

Connecting all renewables and electric vehicles to the grid demands huge capital investments. However, a crucial resource emerging to facilitate a successful transition to clean energy is the flexibility provided by DERs. By embracing flexibility as an alternative, utilities can achieve substantial savings in capital expenditures. To seize this opportunity, utilities must continually engage in grid orchestration, which can only be accomplished through the adoption of digital technologies.

On top of that, prosumers' expectations are continuously increasing, with utilities having the need to find an answer in a form of prosumercentric operating model.



Ren<u>ewable</u> energy sources



Electric vehicle adoption

> Huge capital investments

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DERMS



events

Flexible customer contracts



Flexibility markets



Changing regulation & policy



Prosumers expectations

Energy crisis



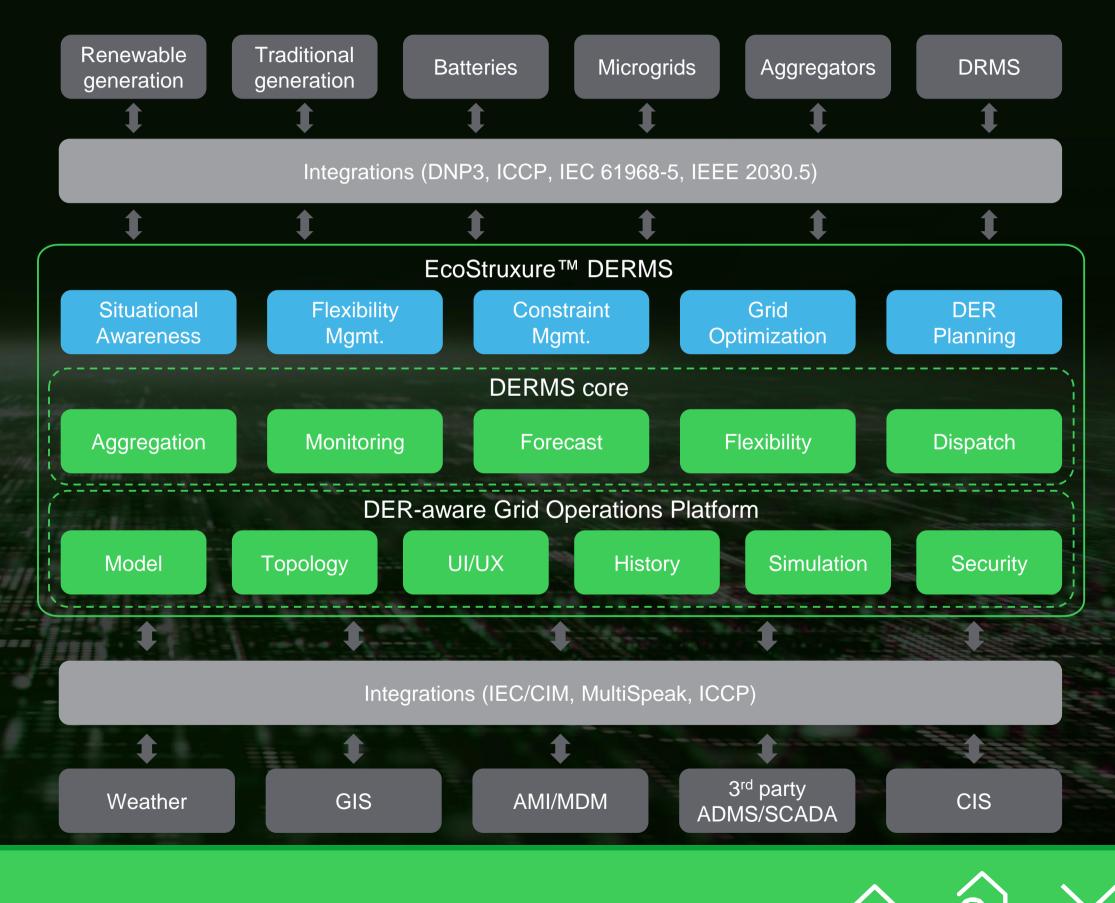






What is EcoStruxure DERMS on cloud? Leading DERMS solution according to Guidehouse Insights Leaderboard

- End-to-end DER management (from planning to operation)
- Look-ahead and real-time constraint management
- From measurement to model-based approach
- Facilitating new types of services and markets
- Situational awareness and hidden load information
- Grid flexibility calculations
- Standardized communication with DERs
- Integration with external systems (incl 3rd party ADMS)
- Seamlessly scale by feeders, users and features
- Cloud solution fully managed by Schneider Electric
- Upholds to highest cybersecurity standards



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Designed with future in mind

Accelerating transition to new energy landscape

- Minimized time to production
- Rapid availability of new features
- ✓ Seamless upgrades

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- ✓ Minimized utility's IT costs
- Scalability w/o upfront capital investments in IT
- ✓ Unlocking flexibility for unlimited DER connection
- Deferring capital investments
 - Keep electricity affordable, reliable and quality
 - Fast customer connections

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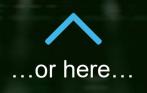
Encouraging stepwise approach Choose your own starting point

Exploratory

- ✓ **Full** feature set
- ✓ Customer's network & DER data
- Operations w/ simulated network state
- Testing DERs via SCADA / IEEE
 2030.5

Production Standard

- ✓ Real-time DER monitoring,
 ✓ DER forecasting,
- ✓ DER-aware as-operated network state
- Measurement-based constraint mgmt.
- ✓ Verification of DER performance
- ✓ SCADA protocols and IEEE 2030.5



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Production Progressive

- ✓ DERMS Standard license tier +
 ✓ Load flow-based constraint
- mgmt.
- Integration with flexibility markets

Add-on: ✓ DER Planning

...or here.

Bringing value to everyone

From customer all the way to utility CEO



Maximizes connection of DERs

Increases customer satisfaction by reducing time and cost of DER connections



Avoids/defers CAPEX

Saves up to 580M \$/€ in CAPEX by using 15% of flexibility capacity



awareness

Interfaces all types of DERs and aggregators. Insight into real-time and forecasted behavior and impact



Ready for use in 2 months or less

Cloud technology enables deployment of system making it available for users in record time



Future-proof

Seamless scaling and rapid access to new features that ensure incremental value over vears



Faster ROI

Capture value quickly by starting with measurement-based approach and gradually progress towards model-based constraint management.

"Customer-focused energy solution that will bolster reliability and affordability on the path to a clean energy future.", Patti Poppe, CEO, PG&E Corporation

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Ultimate situational

www

Unlocking flexibility for constraint management

Constraint management that captures full DER potential by implementing look-ahead and real-time dispatch

Grid to Prosumer

Part of the end-to-end DERMS portfolio that covers full lifecycle of DER management.

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Eager to learn more?

- Read <u>PG&E press release</u>
- Schedule a demo

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