AUTOGRID FOR ENERGY STORAGE

Storage Co-Optimization and Management

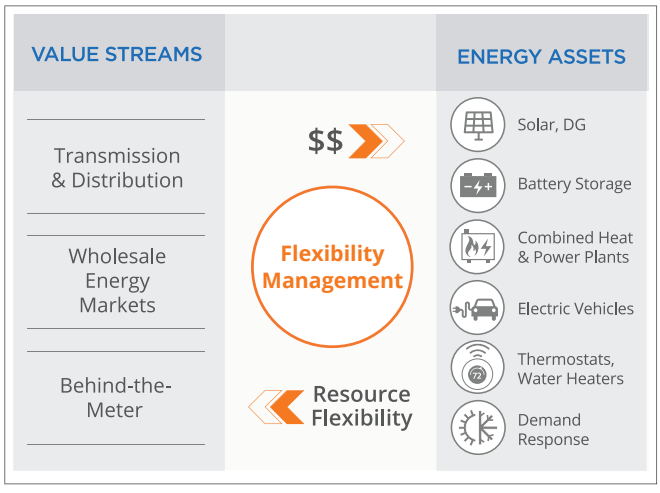
Storage is arguably the most rapidly evolving segment of the energy sector today. It promises to provide the load-smoothing and grid-balancing capabilities needed in an industry accommodating increasing penetration of distributed energy and renewable resources.

However, while the cost of batteries is falling rapidly, without sophisticated forecasting and optimization capabilities, investing in storage often doesn't make economic sense. To get the most value out of energy storage, you must optimize storage at three levels:

- **Local site level.** Co-optimize storage at the local site level to simultaneously achieve several objectives and achieve positive return on investment (ROI)
- **Combined resource level.** Combine storage with other distributed energy resources (DERs) and demand response (DR) to multiply the economic value.
- **Portfolio level.** Aggregate, optimize and monetize a portfolio of storage devices and DERs across multiple sites.

Flexibility Management Software: Transforming the Economics of Storage

Integrated flexibility management software is designed to harness flexible capacity from storage and other DERs, utilizing advanced analytics for real-time optimization and asset dispatch. This cutting-edge approach allows you to co-optimize storage at the local and portfolio levels, both alone and in combination with other DERs.



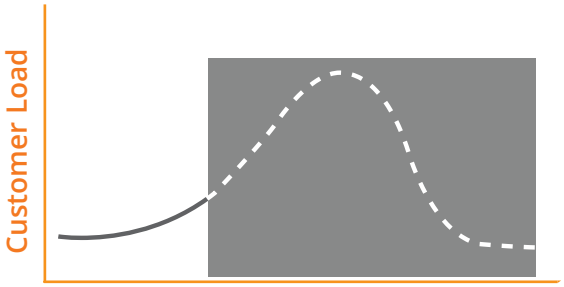
MAXIMIZING THE VALUE OF ENERGY STORAGE INVESTMENTS

Maximizing storage for local sites

The first level of storage co-optimization makes the most out of a battery installation at one facility or residence. For example, a common commercial and industrial (C&I) use case for battery storage is to reduce demand charges. However, the savings from lower demand charges alone are usually insufficient to justify the overall battery costs. Co-optimizing demand charge management with system peak management, however, such as ERCOT 4CP charges, creates significantly more economic value from the local storage system and can push the investment into the quick-payback zone.

To achieve this co-optimization, you need:

- Powerful co-optimization algorithms, enabling you to achieve multiple objectives
- Highly accurate forecasting through big data analytics so that you catch every peak
- Open connectivity standards so you can avoid lock-in to any specific battery type or vendor



Advanced forecasting to optimize utilization at local site

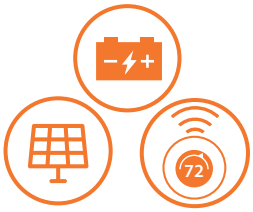
STORAGE CO-OPTIMIZATION USE CASES

- **Demand charge management**
- **Time-of-use arbitrage**
- **Self-consumption**
- **Distribution operational flexibility**
- **Distribution network capital upgrade avoidance**
- **Balancing and ancillary services**
- **Wholesale trading and arbitrage**

TAKING ENERGY STORAGE TO THE NEXT LEVEL

Combining storage with distributed generation and DR

The next step in getting the most value from storage is to combine it with demand response (DR) and other types of DERs. For example, storage and DR can work together to reduce loads and shift them away from peak demand periods, enabling you to balance supply and demand more effectively. Moreover, the high costs of acquiring and onboarding new customers can be shared across both programs, making it much more cost-effective.



Combining storage with DR and other DERs to maximize ROI

To manage storage with other DERs, you need:

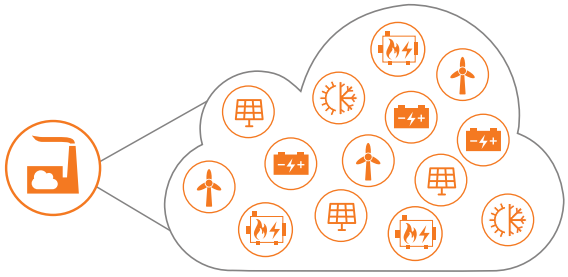
- A unified platform for managing storage, DR and other DERs as a single portfolio
- Advanced analytics to optimize the combination of storage and distributed generation such as solar for both self-consumption cost reduction

Aggregating and optimizing a storage and DER portfolio

The third level of maximizing storage is at the portfolio level. When you can aggregate and optimize a pool of energy storage and other DER assets as a single portfolio, you create flexible capacity. In turn, flexible capacity helps you maximize profitability from wholesale markets, meet site-level needs and provide grid-balancing services to increase operational reliability.

To optimize aggregated storage, you need:

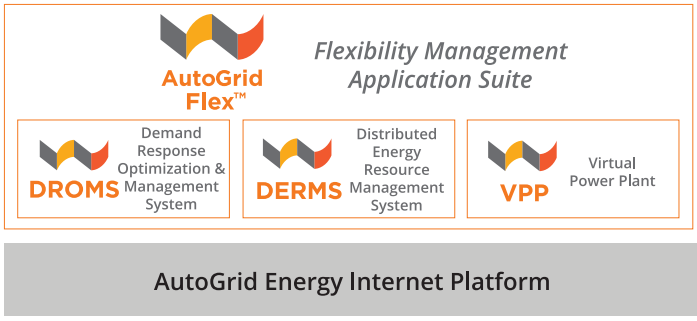
- Real-time aggregation, planning and dispatch optimization of batteries and other DER resources, for example via a virtual power plant (VPP)
- Scalability to forecast and dispatch thousands of storage and other DER resources
- Advanced analytics to maximize profitability from wholesale markets while meeting site-level needs



Portfolio Optimization and virtual power plants for full monetization

AutoGrid Flex™ Flexibility Management Suite

AutoGrid Flex™ is the industry's only integrated flexibility management application suite, able to manage storage and other DERs for storage co-optimization, distributed energy resource management system (DERMS), demand response and virtual power plant (VPP) use cases. Featuring advanced analytics and a modular architecture, AutoGrid Flex allows you to balance supply and demand and maximize returns while speeding new assets, programs and services to market.



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AutoGrid builds software applications that enable a smarter Energy Internet. The world's leading energy companies use award-winning AutoGrid software to deliver economical, clean and reliable energy, managing 2,000 MW of connected energy resources in real time and at scale.

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