AutoGrid Launches AutoGrid Flex™ 3.0, With Innovative Co-Optimization Capabilities that Increase Energy Storage Return on Investment

Industry's first fully integrated flexibility management solution, with more than 2,000 megawatts of distributed energy resources under contract

AutoGrid Flex enables utilities and other energy service providers to use distributed energy resources to increase revenues, drive customer engagement and enhance grid reliability

REDWOOD CITY, Calif— December 7, 2016—AutoGrid Systems, the Energy Internet leader, today announced that it has launched AutoGrid Flex™ 3.0, the energy industry's first comprehensive flexibility management solution for demand response (DR) management, distributed energy resource (DER) management and virtual power plants (VPPs). Now generally available for the first time, the AutoGrid Flex 3.0 application suite features several new energy storage co-optimization capabilities that enable utilities, electricity retailers, renewable energy project developers and other energy service providers to maximize the value of energy storage systems at the local site level, manage energy storage assets in combination with demand response and other types of DERs and optimize aggregation and dispatch from a portfolio of energy storage and other DERs.

These innovative storage co-optimization capabilities, along with new DER integration, enhanced user interfaces (UIs) and other new features further strengthen AutoGrid customers' ability to use the Energy Internet to predict, optimize and control DERs at scale in real time, helping them launch new services that increase revenues, reduce operating expenses, drive customer engagement and enhance grid reliability.

"At Gexa Energy we are always looking to provide additional value to our customers," said Brian Landrum, President of Gexa Energy. "We look forward to working with AutoGrid to deliver energy cost management solutions to customers leveraging energy storage and our existing demand response, energy efficiency, renewable energy, and other energy services."

"Mitsubishi is working on several large-scale energy storage projects, and flexibility management software that can optimize local self-consumption, aggregate a large number of energy storage systems and other DERs into a VPP and provide energy service providers with centralized, real time control of these systems would significantly improve the economics of these projects," said Atsushi Suzuki, Deputy General Manager of the New Energy and Power Generation Division, Mitsubishi Corporation. "AutoGrid Flex 3.0's new energy storage capabilities and proven track record in VPPs directly address our customers' needs for these projects, and we look forward to working with AutoGrid to determine how we can use AutoGrid Flex to maximize the ROI of these projects."

"Energy storage is one of the key enabling technologies in the development of a cleaner, more efficient distributed energy world. However, despite the fact that energy storage costs continue to fall, we still need to dramatically improve energy storage project economics through intelligent software if we hope to truly accelerate energy storage adoption," said Dr. Amit Narayan, CEO of AutoGrid. "By optimizing the value of local energy storage systems, integrating energy storage systems with other DERs and maximizing the ability of energy storage and other DER portfolios to generate payments from wholesale energy markets, AutoGrid Flex 3.0 significantly improves energy storage system economics, making energy storage a more attractive investment for energy service providers and end-customers alike."

Improving Energy Storage Economics
Energy storage's load-smoothing and supply and demand balancing capabilities enable it to serve as a powerful source of flexible capacity in the transformation of the traditional, centralized grid into a modern, distributed, renewable-friendly energy network. However, while energy storage costs are rapidly falling, using energy storage for only a single application -- such as demand charge reduction or backup power -- still often results in project economics that fail to deliver the returns needed to justify investment in the project.

However, AutoGrid Flex 3.0 delivers a fully integrated flexibility management solution that includes three key energy storage co-optimization capabilities -- local site optimization, storage integration with other DERs, and portfolio optimization -- that allow energy service providers to use energy storage to realize multiple business objectives, dramatically improving energy storage project economics while also increasing flexible capacity at the grid edge.
- **Local site optimization:** Powered by sophisticated data models and algorithms and providing support for a wide variety of storage devices, AutoGrid Flex 3.0 enables customers to reduce site-based demand charges, lower system peak charges and use their energy storage systems for other energy cost saving and local balancing applications though highly accurate forecasting and optimized scheduling. These capabilities help energy service providers meet end-customers' growing demand for storage solutions while also avoiding vendor lock-in, extending asset life and increasing project return on investment (ROI).
- **Storage integration with other DERs:** Unlike many other storage software solutions which are asset-specific, AutoGrid Flex provides a single unified hardware-neutral platform for managing energy storage systems in combination with demand response, distributed generation and other DERs. This simplifies DER management by helping end-customers optimize self-consumption by integrating energy storage with their solar and other distributed generation resources. It also reduces customer acquisition and onboarding costs for energy service providers by enabling the bundling of multiple services together, such as storage plus solar.
- **Portfolio Optimization:** AutoGrid Flex enables energy service providers to optimize aggregation, disaggregation, planning and dispatch of a portfolio of energy storage and other DERs in real-time, enabling them to maximize monetization of DERs in energy markets through virtual power plants (VPPs) while meeting end-customers' local site needs. AutoGrid Flex's massive scalability, advanced analytics and support for a wide variety of energy storage systems and other DERs also allow energy service providers to use DER portfolios to create additional flexibility capacity to balance supply and demand, avoid or defer expensive infrastructure investments and create new ancillary service revenue streams.

AutoGrid Flex 3.0 also now includes energy storage system sizing and ROI calculators. The calculators use the open Green Button standard to secure energy use and other data from end-customers' utilities and other energy service providers. With these AutoGrid Flex calculators, energy service providers, energy storage project developers and end-customers can optimize energy storage system size and estimate long-term system ROI, helping them maximize the impact of their energy storage project investments.

Currently AutoGrid is actively working with customers and partners on VPP and other energy storage projects in Germany, the United Kingdom, Japan, California and New York.

New Features Further Enhance Flexibility Management

In addition to the innovative storage co-optimization capabilities described above, AutoGrid Flex 3.0 further integrates its three flexibility management applications into a unified suite that allows energy service providers to view, control and optimize all their DER programs and assets with a single system.

AutoGrid Flex 3.0 features an enhanced user experience with new real-time data visualization capabilities, as well as configurable dashboard widgets. These enhancements provide more personalized, relevant information to users when and how they need it. In addition, new multi-level account hierarchies provide the sophisticated visibility and management tools needed to serve large commercial and industrial (C&I) end-customers.

AutoGrid Flex 3.0 also features improved DER integration, enabling users to monitor DERs in real-time on their dashboards and also secure detailed reports on asset performance over time. Additionally, AutoGrid Flex 3.0 provides expanded integrations for DERs such as the DNP3 protocol, native SCADA integrations, and template-based device configuration including popular devices.

Flexibility Management Increase the Value of Energy Storage and other DERs
The number and capacity of Internet-connected DERs is dramatically increasing -- not just energy storage systems, but also demand response programs, distributed solar power systems, smart inverters, smart thermostats, water heaters, pool-pumps, residential EV chargers, heating ventilation and air conditioning (HVAC) systems, building lighting systems, industrial control equipment and more.

Flexibility management software enables utilities, electricity retailers and other energy service providers to use the Energy Internet to manage these diverse resources across all their customers and also launch new services that increase revenues, drive customer engagement and improve overall system reliability.

AutoGrid Flex integrates AutoGrid's three flexibility management applications -- AutoGrid DROMS™, AutoGrid DERMS™ and AutoGrid VPP™ -- into a single unified application suite, providing energy service providers with a comprehensive flexibility management solution for DERs.
- AutoGrid DROMS™ is a dispatch-grade demand response management system (DRMS) that unifies all programs and assets while delivering a rich, engaging experience to residential, commercial and industrial customers.
- AutoGrid DERMS™ is a hardware-neutral distributed energy resource management system (DERMS) that enables energy service providers to harness customer-owned distributed energy resources to enhance rather than disrupt grid operations and deliver new ancillary services.
- AutoGrid VPP™ aggregates customer-owned storage, generation and demand-side DERs, enabling customers to increase DER value by selling their capacity into wholesale energy markets in real time.

Energy service providers can use AutoGrid Flex to integrate demand response programs, DERs and VPPs into capacity and other energy markets. AutoGrid customers have currently integrated AutoGrid Flex into CAISO, PJM, ERCOT MISO, ISONE energy markets in the United States and the TenneT energy market in Europe.

About AutoGrid Systems
AutoGrid builds software applications that enable a smarter Energy Internet. The company's suite of Energy Internet applications allows utilities, electricity retailers, renewable energy project developers and energy service providers to deliver cheap, clean and reliable energy by managing networked distributed energy resources (DERs) in real time and at scale. AutoGrid applications are all built on the AutoGrid

Energy Internet Platform (EIP), with patented Predictive Controls™ technology that leverages petabytes of smart meter, sensor and third-party data, along with powerful data science and high-performance computing algorithms, to monitor, predict, optimize and control the operations of millions of assets connected across global energy networks.

AutoGrid Flex has more than 2,000 megawatts of DERs under contract with more than 25 global energy companies around the world. Several of the world's leading energy companies, including E.ON, Bonneville Power Administration, Florida Power & Light, Southern California Edison, Eneco, Portland General Electric, CPS Energy, New Hampshire Electric Cooperative, NextEra Energy and CLEAResult, are using AutoGrid's software to improve their operations, integrate renewables and drive deeper engagement with their customers. AutoGrid has been recognized with several prestigious industry awards including the 2016 Energy Productivity Innovation Challenge (EPIC), Greentech Media's Grid Edge Award 2016, Bloomberg New Energy Pioneer 2016, World Economic Forum Technology Pioneer 2015, Red Herring Top 100 North America 2015, Cleantech Global 100 for 2015 and 2014, and Industrial Innovation Company of the Year 2014 by the Cleantech Group.

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