



Advanced Microgrid Solutions



Inland Empire Utilities Agency Takes on “Water-Energy Nexus”

Advanced energy storage systems to enhance energy efficiency,
optimize renewable generation and lower energy costs

CHINO and SAN FRANCISCO, Calif. (November 9, 2015) – The Inland Empire Utilities Agency (IEUA) today announced the launch of a landmark water-energy project using advanced energy storage systems to integrate solar, wind, biogas and grid resources in order to optimize renewable generation, reduce demand on the electric grid and lower energy costs.

As part of this first-of-its-kind project, IEUA will install approximately 3.5 MW of advanced energy storage systems at its regional water-recycling facilities and pump stations in Southern California. The agency signed an agreement with San Francisco-based Advanced Microgrid Solutions (AMS) to design, install and manage the project.

The energy storage systems will range in size from 150 kW to 1,250 kW and will be custom-designed to optimize IEUA’s on-site generation including solar, wind and biogas resources. The batteries will store excess renewable energy and use stored energy to power facilities when demand on the electric grid is high. The energy storage systems will also provide an added layer of protection against outages and enhance the agency’s ability to share the benefits of renewable resources between facilities.

“We are proud of our investments in energy efficiency, renewable generation and sustainable water management practices,” said IEUA Board President Terry Catlin. “Energy storage is the key to maximizing the value of those investments, allowing us to use our resources more efficiently, reduce costs for our customers and participate in building a more resilient electric grid for the whole region.”

“IEUA’s leadership when it comes to technology and water management is recognized across the whole industry,” said Susan Kennedy, CEO of AMS. “Tackling the water-energy nexus head on takes that leadership to a whole new level. This groundbreaking project is designed to optimize energy resources in the management, treatment and distribution of water while enhancing the reliability and resiliency of both the electric grid and water management systems.”

Integrating IEUA’s on-site renewable energy resources will reduce its peak demand from the grid by as much as 14% and reduce total energy costs by 5-10%. The ability to store excess energy also provides the most cost-effective means of sharing on-site renewable generation from among its facilities and provides an added layer of reliability for critical equipment in the event of power outages. AMS will use “Powerpack” commercial battery systems procured from technology leader, Tesla Energy for the IEUA project.

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IEUA's use of advanced energy storage systems enhances the agency's clean energy footprint and continues IEUA's reputation as a leader in clean technology and environmental stewardship. In 2010, the agency installed the largest fuel cell system powered by renewable biogas in the world, and reduced energy consumption by nearly 25% with aggressive energy efficiency measures including installation of sub metering equipment to monitor electricity usage and identify malfunctioning equipment; retrofit of lighting and pumps; installation of variable frequency drives (VFDs) on pumps and motors; installation of dampers on air blowers; and repair of aeration systems to minimize air leaks. "We've invested heavily in clean, efficient resources," Catlin said. "Using energy storage to optimize those resources and dynamically control consumption is the next crucial step forward in IEUA's strategic energy plan to go 'Gridless' by 2020 with almost no capital outlay by the Agency."

About the Water-Energy Nexus

State and Federal energy agencies have found that water and energy resources are inextricably connected, known as the "[Water-Energy Nexus](#)". According to the [California Energy Commission](#), the transportation and treatment of water, treatment and disposal of wastewater, and the energy used to heat and consume water account for nearly 20% of the total electricity and 30% of non-power plant related natural gas consumed in California.

This year, California issued new rules requiring 50% of its power to come from renewables, along with a reduction in green house gas (GHG) emissions to 40% below 1990 by 2030. Water and wastewater systems account for over 45 million tons of GHG emissions annually. In addition to the environmental impact, drinking water and wastewater plants are typically the largest energy consumers for municipal governments, accounting for 30-40% of total energy. Energy as a percent of operating costs for drinking water systems can reach as high as 40% and is expected to increase 20% in the next 15 years due to population growth and tightening drinking water regulations.

About Inland Empire Utilities Agency

The Inland Empire Utilities Agency covers 242-square miles, distributes imported water, provides industrial/municipal wastewater collection and treatment services and other related utility services to more than 830,000 people through its member agencies which include Chino, Chino Hills, Cucamonga Valley Water District, Fontana, Fontana Water Company, Montclair, Monte Vista Water District, Ontario and Upland. To learn more visit, <http://www.ieua.org/>.

About Advanced Microgrid Solutions

Advanced Microgrid Solutions (AMS) is pioneering the use of energy storage systems for electric utility grid support. Using a technology-agnostic approach, the company designs, finances, installs and manages advanced energy storage solutions for commercial, industrial and government building owners. In addition to managing the customer's energy costs, AMS's energy management platform expands revenue-generating opportunities for facility owners through utility capacity contracts, demand response programs and wholesale market transactions. To learn more visit, www.advmicrogrid.com.

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