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Irvine Ranch Water District and Macquarie Capital announce completion of the largest behind-the-meter energy storage project in the U.S.

IRVINE, Calif. – Advancing the cause of sustainability, Irvine Ranch Water District (IRWD) and Macquarie Capital today announced completion of the nation’s largest energy storage system being used for on-site power – a 2.5 MW/15MWh installation now powering the District’s largest water recycling plant.

The award-winning behind-the-meter battery system at IRWD’s Michelson Water Recycling Plant is the centerpiece of an even larger 7 MW/34MWh network of 11 battery arrays set up at water treatment, recycling and pumping facilities throughout the District. The project allows IRWD to buy and store energy when rates are low and use it to power operations during peak hours when the cost of electricity from the grid is high – saving the District approximately \$500,000 in energy costs each year. It also provides a source of stored power for Southern California Edison (SCE) to rely on when necessary to avoid interruptions in service.

For over fifty years IRWD has owned and operated one of the most robust and technologically advanced recycled water systems in the nation. With about 545 miles of recycled water pipelines, 12 storage reservoirs, and more than 5,700 metered recycled water connections, IRWD delivers approximately 27,000 acre-feet — about 9 billion gallons — of recycled water per year.

The battery storage project is just part of the District’s ongoing mission to promote innovative and sustainable solutions to meet the water and resource recovery needs of the community. Recycled water makes up more than a quarter of the District’s water supply portfolio — reducing reliance on costlier imported water supplies, increasing the District’s self-sufficiency, keeping landscaping green and beautiful, supporting fertile agricultural areas, and fueling the local economy’s commercial and industrial needs.

Macquarie Capital is the owner and operator of the energy storage systems. It partnered with IRWD as part of its efforts to help modernize SCE’s electric grid across the utility’s West Los Angeles Basin service territory. The project was designed by tech startup Advanced Microgrid Solutions (AMS) using lithium-ion power packs from Tesla Energy and AMS’ industry-leading transactive energy management platform.

“The completion of the Michelson battery project underscores the promise of grid-connected storage to deliver flexibility and value to utilities, customers and ratepayers alike,” said Michael Silverton, head of Macquarie Capital in the Americas.

A portion of IRWD’s energy storage network will be supplemented by renewable energy sources to further the economic and environmental benefits of the project.

“IRWD is incredibly proud of its investment in energy solutions that serve our customers more effectively and efficiently while helping SCE operate the grid,” said Paul Cook, general manager of IRWD. “This project underscores the District’s ongoing commitment to making the most of all resources as demonstrated by our highly successful water efficiency programs and history of providing recycled water service to the community for use in landscape irrigation, cooling towers and dual-plumbed buildings.”

“This project epitomizes the concept of storing surplus and saving it for later. As we experience more volatile climate extremes, which puts pressure on both water and electricity sources, IRWD will drive solutions to prepare for leaner times,” Cook added.

The energy storage project has won the Golden Hub of Innovation Award from the Association of California Cities, Orange County; and the Best Energy Program Award for medium utilities from the California Municipal Utilities Association.

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About Irvine Ranch Water District | Irvine Ranch Water District is the largest retail water agency in Orange County, California. Established in 1961, IRWD provides high-quality drinking water, reliable sewage collection and treatment, ground-breaking recycled water programs, and environmentally sound urban runoff treatment to more than 390,000 residents. As an independent, not-for-profit public agency, IRWD is governed by a five-member publicly elected Board of Directors. To learn more, visit irwd.com.

About Macquarie Capital | Macquarie Capital combines grounded thinking with innovative approaches to develop transformative ideas and realize greater possibilities for our clients — our partners. We look beyond convention to connect our clients with ideas and opportunities others don’t see, while our global platform, specialized expertise and comprehensive services allow us to deliver what others can’t. Our capabilities encompass corporate advisory and a full spectrum of capital solutions, including capital raising services from equity, debt and private capital markets and principal investments from Macquarie’s own balance sheet. These offerings are reinforced through our deep sector expertise in aerospace, defense and government services, consumer, gaming and leisure, financial institutions, infrastructure and energy, real estate, resources, services, telecommunications, media and technology sectors across the U.S. with 402 transactions completed, valued at \$264 billion in the year ended March 31, 2018.

About Advanced Microgrid Solutions | Advanced Microgrid Solutions (AMS) is an energy platform and services company that designs, develops, optimizes, and monetizes energy assets to maximize customer value, provide dynamic grid and utility services, and earn revenues in wholesale energy markets. AMS’s business is powered by its industry-leading Transactive Energy Management Platform, which AMS and its partners utilize to offer compelling and innovative energy management services to customers, utilities, and asset owners and operators. To learn more, visit advmicrogrid.com and follow us on twitter: @advmicrogrid.