

project profile



Demand Shed Reduces Demand Charges

The Cucamonga Valley Water District, supported by Honeywell Smart Grid Solutions, now participates in the Southern California Edison Automated Demand Response (ADR) program. Participation helps mitigate peak demand charges – offsetting operational and maintenance costs – while ensuring water quality, system pressure and operational stability.

Honeywell

Akuacom

by Honeywell

Honeywell Helps Water District Shed 40 Percent of Load; Achieve Savings

The Customer

Cucamonga Valley Water District

- Cucamonga Valley Water District (CVWD) provides drinking water treatment, distribution and wastewater service in Southern California.
- The CVWD service area covers 47 square miles in San Bernardino County and supports an average daily demand of 50 million gallons of water for more than 186,000 customers with 35,000 sewer connections and 45,000 water connections.

The Problem

- The 50+ year-old CVWD system needed repairs and upgrades.
- Flattened population and water conservation programs have reduced the quantity of water delivered as well as revenue, putting substantial pressure on CVWD operating and capital budgets.
- CVWD operators had little visibility into system-wide electricity usage and had to manually manage demand response events.
- CVWD is also responding to new tariffs from Southern California Edison (SCE) that increase demand charges during peak days but enable participation in rebate programs to help pay for some of the project costs.

Honeywell Solution

- CVWD enrolled in an SCE Automated Demand Response (Auto DR) program managed by Honeywell, which uses Akuacom by Honeywell Demand Response Management System software that provides a secure path for communicating with building and process control systems during a demand response event and automatically triggers pre-set load-shedding measures.
- A custom-designed Auto DR strategy enabled CVWD to shed 5.3 megawatts over a two-hour period when requested by SCE. When an Auto DR event is called, CVWD will be able to shed nearly 40 percent of its load.
- Honeywell worked with CVWD to develop three major zones to enable SCE to verify that the infrastructure capacity was sufficient to serve the customer.
- Software upgrades enable CVWD to curtail significant load through motor equipment and provide valuable information back to CVWD for future participation in other energy efficiency and demand response programs.
- An SCE load-shed test yielded enough kilowatt shed to provide incentives that ultimately funded the entire project implementation.

Key Technologies

- Updated SCADA system
- New programmable logic controllers
- New radios
- Updated towers and antenna infrastructure
- Enterprise Building Integrator building management system

Honeywell Implementation

- Honeywell partnered with CVWD to audit the facility's energy usage and control capabilities as well as inventory the SCADA network.
- CVWD and Honeywell collaboratively designed and implemented network enhancements and shed strategies to automatically reduce load at 22 remote well and booster sites in response to peak events.

CVWD Already Seeing Great Results

CVWD expects to see significant savings:

CVWD's Auto DR participation with SCE resulted in a load shed of 5.3 megawatts over a two-hour period.

Load
Shed



Initial revenue saving rebate of \$400,000 from SCE for participation in Auto DR program.

Revenue
\$ 400,000



Savings of \$80,000 per year by mitigating peak demand charges during estimated 12-15 annual demand response events.

Savings
\$ 80,000



No significant impact to business due to lapses in water production or flow, meaning fewer future service calls.

Service
Calls



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