



CASE STUDY: DESERT WATER AGENCY

Desert Water Agency, Palm Springs, California:
2.5 MW of monthly demand response commitment gives the Desert Water Agency energy savings and additional revenue to offset costs.

The Customer: Desert Water Agency

The Desert Water Agency (DWA) is a not-for-profit government agency providing water to the desert resort community of Palm Springs, in the Coachella Valley, as well as adjacent areas. Nearly all of the water that is used in the Coachella Valley comes from a groundwater basin, or aquifer, estimated to contain about 30 million acre-feet of water. DWA pumps water using 29 wells spread throughout its retail area, and delivers it to 23,000 water connections serving approximately 106,000 residents and businesses.

DWA embraces sustainable energy resources, including hydroelectric and solar, to power its pumps and generate energy savings. A solar field comprising 4,500 ground-mounted fixed tilt panels produces just over a megawatt of energy. The solar facility powers their Operations Center and Water Reclamation Plant, and is projected to save the Agency and its ratepayers about \$6 million in energy costs during its lifetime.

The Challenge: Tap the Demand Response Revenue Stream

The demand response program offered by CPower pays customers for reducing their energy usage upon same-day notification of a possible grid event. DWA understands the benefit of earning additional revenue by curtailing their power load, and using that revenue to further offset energy costs. The key to DWA's successful participation was technically implementing a curtailment program with the least possible disruption to its operations and its customers. Wells throughout the city that could participate in the program would be turned off when CPower issues a curtailment notification.

“Our relationship with CPower has huge benefits for our agency and the community we serve... Their team has integrity, is there when we need them and has the expertise needed to make this a win-win.”

*- Steve Johnson
Assistant General Manager*

That left them with one important question: “Can we survive three to four hours of having wells shut down and still be able to refill our reservoirs to meet customer demand?”

The CPowered Strategy: One Well at a Time

Thankfully, with CPower's help, the answer was “Yes.”

DWA chose CPower as their demand response provider to manage their participation in the demand response program. CPower provides a team of energy experts to review the Agency's operations and energy goals. Together, DWA and CPower developed an energy management strategy that gives DWA the tools to optimize their participation in the program.



Xeriscape, Desert Water Agency

The strategy called for DWA to start with a small number of wells, to familiarize themselves with the curtailment process with minimal impact on day-to-day operations. As DWA's staff became more comfortable with the process, more wells were added, until all eligible wells— 25 of their total of 29 — are now actively participating and generating revenue for the Agency.

CPowered Solutions: Power Empowerment

Understanding the Agency's preference for autonomy over automation, CPower empowered it with the tools to control its energy spend and demand response participation. The Agency can turn individual sites on and off at will upon notification through their

supervisory control and data acquisition (SCADA) software to implement the custom-designed energy strategy developed with CPower's experts. Perhaps best of all, the Agency can manage it all from their central Operations Center, without dispatching staff to well sites under a grid-stressing desert sun.

CPower collects utility meter data for each of DWA's sites, and supplies them with performance data. These data provide DWA with an understanding of each site's base load value. The Agency can use these data to decide their optimum load curtailment commitment for each month of the program.

The Results: An Oasis of Cost-Saving Revenue

DWA typically nominates a changing rotation of eight wells each month into the program. The total monthly load drop amounts to about 2.5 MW. This is a significant commitment that helps relieve stress on the electric grid.

The program also provides DWA significant financial incentive for their participation. During a recent six-month period, May-October, they received \$105,872.68 in payments for their participation. These incentives allowed them to further offset their energy costs, to the benefit of their customers.

Just as importantly, perhaps, DWA enjoys the total commitment of CPower's dedicated California energy market experts. The Agency knows from experience that CPower will support their energy goals at every turn, with an energy strategy custom-made to meet their unique requirements.

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