



# The Water Garden

## Office Building Complex Pumps Up Energy Savings Using SCE’s Automated Demand Response Program

### Building a Commitment to Energy Savings

The largest commercial property in the Santa Monica area, The Water Garden provides a premier business environment for its tenants. Its 17-acre campus includes eight office towers, with a lake, six fountains and tree-canopied paths that create a true urban oasis.

This outdoor beauty exists hand-in-hand with a strong commitment to conservation. A long-time proponent of energy efficiency, in early 2010 The Water Garden complex earned a U.S. Green Building Council Leadership in Energy and Environmental Design (LEED)® Gold Certification for Existing Buildings in recognition of its green building features.

As part of its ongoing effort to save energy, money and the environment, The Water Garden, through property management firm CB Richard Ellis, enrolled in the Automated Demand Response (Auto-DR) program.

Auto-DR allows customers with an automated load control system, such as energy management (EMS) or Supervisory Control and Data Acquisition (SCADA) systems, to participate in

SCE’s DR programs with no manual intervention, providing flexibility and ease of use. Customers pre-select their level of participation and earn incentives for peak-period energy load reductions, which help ensure adequate electricity supplies and also offer environmental benefits.

SCE provides incentives of up to \$300 per kilowatt (kW) of tested load reduction for system upgrades and technologies that allow Auto-DR. The Water Garden’s incentive totaled approximately \$46,500, which facility General Manager Christa Duggan says “paid for virtually the entire energy management system.”

The Water Garden uses Auto-DR to participate on the Critical Peak Pricing (CPP) rate schedule, which rewards customers for reducing or shifting electricity usage during critical peak events, when the demand for and price of electricity climb.

### Adding Auto-DR to the Energy Solution

During a CPP event, a central system sends a signal to The Water Garden’s EMS to automatically turn off the pumps that feed the site’s water features. This allows The Water Garden to take part in DR events, given its limited options to reduce or shift load inside the buildings

## Project Overview

### SCE Programs Utilized:

- Automated Demand Response (Auto-DR)
- Critical Peak Pricing (CPP)
- Express Solutions
- Customized Solutions

### Results:

**\$46,500** for the Auto-DR equipment, bill credits of more than **\$4,700** by participating on the CPP in 2010; more than **2.7 million** kilowatt-hours and **\$400,000** annually from other energy efficiency measures

“It’s a ‘no-brainer.’ It’s transparent to tenants and doesn’t impact their work productivity.”

Christa Duggan, The Water Garden General Manager, on the Santa Monica commercial property’s use of Auto-DR

during peak-period times without affecting tenants. The Water Garden retains the ability to override the automated signals and change its load reduction strategies at any time.

In its first summer participating on CPP using Auto-DR, The Water Garden saved \$4,770 on its electric bills, and can drop as much as 140 kW per CPP event.

“It’s a ‘no-brainer,’” Duggan says. “It’s transparent to tenants and doesn’t impact their work productivity.” Chief Engineer Willie Weddle says the EMS system that allows for use of Auto-DR also provides the advantage of scheduling pump system operations from one location, instead of from six separate pump rooms located throughout the complex.

“Before we worked with six different time clocks, which were hard to synchronize,” Weddle says. “Now we can instantly go to a computer screen and make changes to the pump schedules. With a couple of mouse clicks we can accommodate a change.” Weddle adds that the automated system makes it as easy as possible to reduce load during critical times.

“We get an automatic e-mail the day before a CPP event is scheduled,” he says, “and we don’t have to do anything else.”

## Annual Energy Efficiency Savings of \$400,000-Plus

In the decade prior to implementing Auto-DR, The Water Garden took significant steps to lessen its energy usage, including:

- Retrofitting more than 8,600 garage fixtures (32-watt T8 lamps to 25-watt T8 lamps) and about 230 equipment room light fixtures (T12s to T8s)
- Replacing 440 stairwell light fixtures with occupancy sensors and 15-watt pilot lights
- Installing variable speed drives (VSDs) on the cooling towers, HVAC fans and chillers at the complex
- Implementing an “on-demand” program that allows tenants to request air conditioning on Saturdays, but otherwise not running it on that day

Weddle says these measures and many others saved The Water Garden more than 2.7 million kilowatt-hours annually over the 10-year period, for annual savings of \$400,000-plus.

The Water Garden also received more than \$280,000 in incentives for installing qualifying high-efficiency equipment. “It’s a corporate responsibility to our community to be more efficient,” Duggan says of The Water Garden’s long-term commitment to energy savings. “It also lowers our operating expenses, with savings passed through to tenants.”

Duggan says that once higher levels of DR incentives became available, it made sense to take that next step beyond energy efficiency. The Water Garden’s SCE Account Manager, she adds, “always comes up with great ideas and looks for ways for us to reduce load and get incentives.”

For other commercial properties also looking to save energy, money and the environment, Duggan recommends starting with SCE. She says, “Having a good relationship between the account manager, building managers and engineers goes a long way.”



**To learn more about SCE energy management solutions, ways to reduce your energy usage and manage your energy costs, visit [sce.com/business](http://sce.com/business) or call your SCE Account Manager.**

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