



West Basin Municipal Water District



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West Basin Municipal Water District Puts Power Into Energy Savings at Recycling Facility

Already a leader in water conservation and recycling, West Basin Municipal Water District (West Basin) continues to step up its commitment to energy savings with enhancements to its Edward C. Little Water Recycling Facility (ECLWRF) in El Segundo, California, that are improving efficiencies and enabling Demand Response (DR) participation.

In late 2009, West Basin completed a major upgrade of the Supervisory Control and Data Acquisition (SCADA) system at the ECLWRF, receiving technology incentives of \$272,000 from Southern California Edison (SCE) through the Technical Assistance and Technology Incentives (TA&TI) Program. This program provides eligible business customers with free DR site assessments and offers financial incentives for installing eligible DR equipment that reduces electricity usage during peak-demand periods. West Basin's verified demand reduction capability equals 2.2 megawatts.

Demand Response Opportunity

The ECLWRF produces 30 million gallons of recycled water daily, conserving enough drinking water to

meet the needs of 60,000 households for a year. West Basin General Manager Rich Nagel notes that the former data system was "maxed out" on what it could control, but the upgrade helps ensure ongoing reliability and allows the district to manage more equipment automatically.

As a result, West Basin entered into a third-party Demand Response Contract (DRC), enabling it to reduce more than one megawatt of load when required and earn incentives in the process. This strategy goes beyond the district's standard procedure of shifting equipment use to off-peak periods as much as possible. Nagel says the upgrade "made sense for us because it gives us the chance to support the district's commitment to environmental stewardship while saving money."

The upgrade allowed the district to move forward with its fourth plant expansion of the recycling facility, scheduled for completion in the next year. West Basin used the statewide Savings By Design program to receive design assistance and a \$200,000 Energy Efficiency (EE) incentive for high-performance new building construction. The expansion

Estimated Savings by Managing Energy

- **Location:** El Segundo, CA and the coastal areas of Los Angeles County
- **Industry:** Water District
- **SCE Programs Utilized:** Self Generation Incentive Program (SGIP), Customized Solutions, Savings By Design, Technical Assistance & Technology Incentives (TA&TI), Demand Response Contracts (DRC)
- **Incentives:** \$1,751,246 for SGIP, \$272,000 for TA&TI, \$66,565 for Customized Solutions, \$200,000 for Savings By Design
- **Savings:** \$90,000 annually and 4.1 GWh year to date due to solar, 1 megawatt (MW) of demand reduction, 500,000 kilowatt hours (kWh) annually from variable frequency drives (VFDs)

SCE INCENTIVES

\$2,289,811

Energy Management Success Story

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is part of West Basin's Water Reliability 2020 program to reduce dependence on imported water by 50% by the year 2020. Reducing use of imported water will also reduce West Basin's carbon footprint.

Solar Savings and Pumping Progress

The SCADA enhancement for West Basin, which wholesales imported water to 17 cities and private companies and 1 million people in southwest Los Angeles County, builds upon an ongoing partnership with SCE.

In late 2006, the district installed 60,000 square feet of fixed-tilt photovoltaic panels at the ECLWRF, receiving almost half of the system cost back through SCE Self Generation Incentive Program (SGIP) available at the time (solar incentives are now available through the California Solar Initiative program). The system produces 900,000 kilowatt-hours (kWh) annually, with a rated power output of 500 kilowatts.

In addition, West Basin takes advantage of SCE's free pump tests to look for opportunities to increase energy efficiency, reduce costs and improve system reliability. These tests use the latest in fluid flow and electronics measurement equipment.

"This year we changed out some of our traditional pumps by installing VFDs on two barrier injection wells as a result of the findings and received a Customized Solutions incentive of \$66,565," Nagel notes.

Nagel gives credit to SCE for helping West Basin save energy and money. "Look into SCE programs if you like to save money and the environment."

To see how West Basin Municipal Water District saved, please watch the video www.sce.com/businessvideos



"The upgrade of the SCADA system helps ensure ongoing reliability and allows the district to manage more equipment automatically."

Rich Nagel, West Basin Municipal Water District General Manager

Earn Even More Savings with Other SCE Offerings

- Receive financial incentives for replacing or upgrading to qualifying high-efficiency equipment and systems through SCE's Express Solutions and Customized Solutions. **(800) 736-4777**
www.sce.com/Express_Solutions
www.sce.com/Customized_Solutions
- Install SCE's Automated Demand Response (Auto-DR). It incorporates automated load control systems (an energy management system) to carry out Demand Response strategies and reduce energy load during peak hours, without manual intervention. **(866) 238-3605**
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www.sce.com/workshops
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