



## Suburban Water Systems



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### One Hundred Years of Free Pump Testing Services from SCE: Suburban Water Systems Turns to SCE to Enhance Pump Efficiencies

#### Incentives of \$177,000 for Pump Upgrades

Suburban Water Systems continually works to provide the highest-quality, most reliable water service at the best possible price. To assist in meeting this goal, Suburban turns to Southern California Edison’s (SCE) free pump testing services to assess how effectively its 19 active well pumps and 90-plus booster pumps help distribute more than 16 billion gallons of water annually.

The company began using SCE’s pump testing services in the 1950s and has continued using the services “because we developed a relationship with SCE and realized the value of the testing in terms of equipment reliability and investment decisions,” says Communications Manager, Michael Nutt.

Through SCE’s various energy efficiency offerings — including Customized Solutions — Suburban received incentives for replacing or upgrading to qualifying high-efficiency pumping equipment. From 2007 through 2010 alone, Nutt says,

Suburban received approximately \$177,000 in SCE incentives for pump replacements and the installation of variable frequency drives, helping the company save energy and reduce power costs, as well as lower customer bills.

#### An Overall Plant Efficiency (OPE) Increase of Nearly 18 Percent

According to Suburban Operations Data Analyst, Nicholas Cafagno, the company spends about \$2.5 million annually on electricity, so “whatever we can do to cut that down is good for us.” SCE’s pump testing services help Suburban do just that — as shown by this example.

#### Pump Testing Services Results for one of Suburban Water Systems’ Booster Pumps

	Before (Old Pump)	After (Replacement Pump)
OPE	52.9%	70.8%
Kilowatt-Hours/Acre Foot	536	407.2
Average Cost Per Acre Foot	\$43.59	\$33.02

#### Estimated Savings by Managing Energy

- **Location:** San Jose Hills District and Whittier/La Mirada District (southeast of Los Angeles)
- **Industry:** Water Utility
- **Description:** An investor-owned utility that serves a population of about 300,000 in an approximately 42-mile service area, with 32 reservoirs, more than 110 pumps and more than 800 miles of pipeline
- **SCE Offerings Utilized:** Pump Test and Hydraulic Services, Customized Solutions, Time-of-Use Rates and Demand Response Contracts
- **Results:** Increased overall pumping plant efficiency, lower electricity costs and a reduced carbon footprint

#### APPROXIMATE INCREASE IN OVERALL PLANT EFFICIENCY

# 18%

# Energy Management Success Story

## Suburban Water Systems Turns to SCE to Enhance Pump Efficiencies

### Projected Savings:

- Up to 80,800 kilowatt-hours annually
- Up to \$6,500 each year in electricity costs

With this one pump improvement, Suburban lowered its average cost to serve an acre foot of water (enough to meet the annual average indoor/outdoor water needs of one to two households) by close to 25 percent.

“We realize the importance of reducing the cost of non-efficient equipment and the advantage of using SCE’s services,” explains Nutt.

SCE’s services also help the company select the best electricity rates, which include Time-of-Use (TOU) rates that provide lower costs for pumping at night (during off-peak hours) to fill storage tanks where water flows by gravity during high-cost time periods. “We review our SCE rates every year in an effort to change to more economical energy rates,” Cafagno says. Suburban further reduces costs by participating in Demand Response events using an Aggregator contracted under SCE’s Demand Response Contract portfolio.

Suburban’s partnership with SCE provides additional benefits that go beyond immediate savings.

“Our goal is to be a good corporate citizen. That’s part of our culture,” says Nutt.

He also notes that reducing electricity use helps the company lower its carbon footprint. “We’re looking at all aspects of our operations to be as environmentally friendly as possible,” Nutt says. “It’s good business. The pumps are probably the most visible and prominent example of it.”



Nick Cafagno, Operations Data Analyst; Craig Fulfer, Senior Maintenance Technician; and Michael Chiraulo, Maintenance Technician II

# Energy Management Success Story

**“We realize the importance of reducing the cost of non-efficient equipment and the advantage of using SCE’s services.”**

Michael Nutt, Communications Manager, Suburban Water Systems

## SCE’s Pump Test and Hydraulic Services: A Century of Value

2011 marks 100 years of serving customers through SCE’s Pump Test and Hydraulic Services offering, one of the largest and longest-running pump-related energy efficiency offerings in the nation. Benefits of SCE’s free pump testing services may include:

- increased energy efficiency,
- reduced costs, and
- improved system efficiency.

The pump testing services determine the overall “wire-to-water” efficiency of a pumping plant by analyzing the water level in a well during pumping, discharge flow rates, and power input to the pump motor. These measurements of pump performance in progress allow customers to track pumping plant efficiency and determine when maintenance or overhaul will be cost-effective.

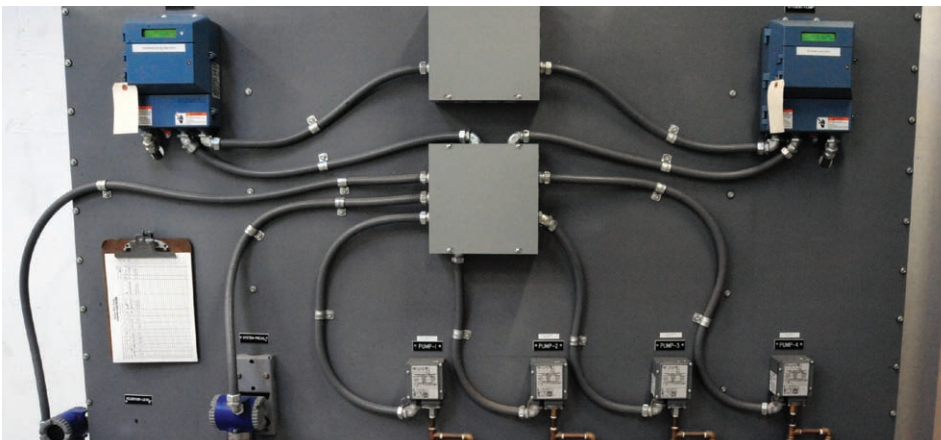
SCE also offers recommendations to capture efficiency and cost-saving opportunities elsewhere in the pumping system, such as by minimizing piping friction losses and matching pressure to varying flow requirements through the use of variable speed drives. In addition, SCE provides several fee-based predictive maintenance services, including infrared panel inspection and cleaning, vibration detection analysis, meg-ohm testing, and industrial services.

To learn more about SCE’s Pump Test and Hydraulic Services, as well as other energy management solutions for agricultural and utility properties, contact your account representative or visit [www.sce.com/b-rs/agriculture/agriculture.htm](http://www.sce.com/b-rs/agriculture/agriculture.htm).

To schedule a pumping test, log onto [www.sce.com/forms/RequestPumpTest.aspx](http://www.sce.com/forms/RequestPumpTest.aspx).

## Earn Even More Savings with Other SCE Offerings

- Receive financial incentives for replacing or upgrading to qualifying high-efficiency equipment or systems through Express Solutions and Customized Solutions.  
**(800) 736-4777**  
[www.sce.com/solutions](http://www.sce.com/solutions)
- Save more with SCE’s Pumping and Agricultural Real-Time Pricing (PA-RTP) and other Demand Response Programs.  
**(866) 334-7827**  
[www.sce.com/drp](http://www.sce.com/drp)
- Switch to a Time-of-Use (TOU) rate and take advantage of lower energy rates by shifting electricity usage to off-peak hours.  
[www.sce.com/Customerservice/rates/business/business-rates.htm](http://www.sce.com/Customerservice/rates/business/business-rates.htm)
- Take free SCE classes in water irrigation, well efficiency, pipeline flow measurement, lighting, HVAC, energy management and more at an Edison Energy Education Center.  
**Irwindale: (800) 336-2822**  
**Tulare: (800) 772-4822**  
[www.sce.com/workshops](http://www.sce.com/workshops)



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## Start Saving Now

SCE offers a variety of solutions such as energy audit tools, financial incentives and assistance, consulting services, and technical services to help you better manage your electricity costs.

## For More Information

[www.sce.com/business](http://www.sce.com/business)

**San Joaquin Valley: (800) 634-9175**  
**Ventura/Antelope Valley: (800) 338-8502**  
**Los Angeles: (909) 820-5333**

**Contact your SCE Account Representative**

