



# City of Brea



## The Opportunity

The City of Brea, nestled among the rolling foothills of the Chino Hills Range, prides itself on its small-town atmosphere. Committed to sustainable development, the city provides a diverse range of services to its 40,000 residents with the goal of harnessing long-term benefits for a growing community. The city's innovative Green Life, Green Brea program underscores Brea's strong commitment to the environment by providing a forum for sharing green practices with residents and businesses.

## The Partnership

In July 2010, Brea partnered with OpTerra Energy Services to design and implement a comprehensive, citywide program as part of its Green Life, Green Brea initiative. Created to meet the unique needs of Brea's community, the innovative program – complete with 1.8mw solar power generating systems – will continue to generate savings for the city's General Fund by reducing overall utility consumption and mitigating costly water pumping fees. The long-term benefits the program has brought to the community are significant: creating over 100 new jobs, attracting businesses to headquarter in Brea, and improving workforce development and training. The energy efficiency and solar power program delivers significant, long-term benefits to the City of Brea – further crystalizing Brea's position as a leader in sustainability among California cities.



## Program Highlights

- \$13 million in cost savings projected over the life of the project
- Reduced utility costs by as much as 40 percent
- Reduced 86,000 metric tons of CO<sub>2</sub> over 25 years through clean solar power generation – equivalent to removing 16,000 cars from the road

## Technical Scope

- 1.8-megawatt solar PV system at three city sites (Civic Center and Reservoir Pump Yard and shade structures at the Community Center)
- City-wide street light retrofits to energy-efficient induction lights
- Interior and exterior lighting retrofits at 14 sites
- Major heating, ventilation and air-conditioning infrastructure upgrades and controls at six civic sites



## Water Scope

As the city considered options for savings, it became important to design a plan that would incorporate efficiencies for water operations, given significant electricity input to meet pumping demands. 4,914 roof-mounted photovoltaic panels with 1,154 kW capacity were installed over the main reservoir in the Public Works yard in order to help mitigate future pumping costs to the city. HVAC upgrades were also made at the City Yard Pump House to improve reliability and efficiency.

## The Impact

As part of Brea's Green Life, Green Brea program, Opterra Energy Services helped transform vital city spaces with the community in mind. Outfitting the Brea Civic and Cultural Center with modern solar arrays, for example, not only offered shade during the day for visitors and passersby, but was coupled with upgraded energy efficient lighting on sight for improved lighting during night events. Helping the city save over \$13M over the lifetime of the project, the Opterra Energy Services program reduced Brea's utility costs by as much as 40 percent. In order to ensure the impact of these dramatic savings translated to long-term community education on sustainability, real-time solar production data at the Community Center was captured through an interactive, informational kiosk display and on the city's website.

