

# case study



**A solar and energy conservation program brings environmental and financial benefits to an innovative city.**

Faced with rising energy costs and the desire to implement renewable energy technology, the City of Perris worked with Honeywell to decrease carbon emissions, upgrade building systems and facilities, and cut the city's energy use.

**Honeywell**



# Renewable Energy Never Looked So Good

Beginning in 2005, the City of Perris, California made a commitment to incorporate environmentally-conscious policies into its general plan. With the passing of California's Global Warming Solutions Act in 2006, city officials strengthened their focus on identifying the right solutions to reduce the city's carbon footprint and energy costs. However, a lack of funding for capital improvements hindered the city's efforts.

In April 2006, the city partnered with Honeywell for a solar and energy conservation project called the Perris Solar Shine Program. The program promised to significantly decrease carbon emissions, upgrade building systems and facilities, and cut the city's energy use.



## Shades of Green

Honeywell worked closely with city officials and architects to create a solution that would combine renewable technology with the aesthetics of the town's Mission Revival style architecture.

The centerpiece of the program was the installation of solar panels on the roofs of carports at the Perris library, senior center, fire house, corporate yard and City Hall. The custom SolarPorts™, designed by SPG Solar, Inc., are capable of producing 370 kilowatts of electricity annually – enough energy to power about 100 homes per year. The carports will also provide more than

240 shaded parking spaces for residents and city workers.

Honeywell augmented the program with traditional energy conservation measures, including lighting retrofits, high-efficiency heating and cooling units, and programmable thermostats, to improve city facilities and building systems. These upgrades provide the city with better control and comfort at its facilities while reducing energy consumption.

## Community Benefits

Using a power purchase agreement, Honeywell installed the solar arrays without any increases to the city's operating budgets or additional costs to taxpayers. Under the 20-year agreement, the company operates and maintains the arrays while providing electricity to Perris at a competitive price compared to conventional utility rates.

In the first six months after construction, the solar panels generated 112,000 kilowatt-hours of electricity – more than half the estimated annual power production. That's enough energy to cover 20 percent of Perris' electricity needs, surpassing the goals in the general plan by 300 percent. The solar carports and traditional energy conservation measures are also expected to reduce the city's annual carbon dioxide emissions by 960,000 pounds.

## Above and Beyond

The Perris Solar Shine Program has received several awards, including the Helen Putnam Award for Excellence and the American Planning Association's Planning Excellence Award for Innovation in Green Community Planning. In addition, the program was a finalist for the Urban Land Institute Sustainable Cities Award.

As the city looks to the future, officials are confident the innovative solutions and energy-saving infrastructure upgrades will continue to benefit the community for years to come.

"The entire program educates our residents, reduces greenhouse gas emissions and provides clean and reliable energy," said Ron Carr, assistant city manager for Perris. "The benefits to our community have been enormous."

## Snapshot

### City of Perris

#### Overview

- Located in Riverside County, California
- Home to more than 55,000 residents
- Averages 275 solar radiation days per year

#### Situation

City officials wanted a green solution that would integrate with the community's landscape while providing maximum environmental impact and economic benefit. However, finding the right solution and the necessary capital was a challenge.

#### Solution

The city worked with Honeywell to install solar panels on the roofs of several new carports. The company also implemented traditional conservation measures to improve energy efficiency and comfort – all without requiring additional capital. The program is expected to:

- Produce 370 kilowatts of renewable energy annually – enough power to cover 20 percent of the city's electrical needs
- Reduce annual carbon dioxide emissions by 960,000 pounds, which is equivalent to removing more than 90 cars from the road
- Increase public awareness of global warming and meet the sustainability objectives of the city's general plan

## Honeywell Building Solutions

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