



# City of Palm Springs



## THE OPPORTUNITY

With 354 days of sunshine per year, the City of Palm Springs is a true California gem nestled at the base of the San Jacinto Mountains. This extraordinary climate also presents a unique set of challenges, with sustainable management of City resources being essential to maintaining growth in this thriving desert destination city. The City sought a partner that would help them develop a comprehensive energy program to address needed infrastructure upgrades as well as fund a sustainable means to support ongoing City initiatives. In addition, The Palm Springs City Council set a guiding principal that the citywide program must be a paid-from-savings project requiring zero capital outlay from the City.

## THE PARTNERSHIP

The City of Palm Springs had established a Sustainability Commission to help achieve the Council's ambitious sustainability goals tied to meeting state climate action initiatives. With a comprehensive, citywide sustainability plan in place, the City turned its attention to improving the efficiency of its own facilities to reduce energy and water consumption. In the Spring of 2010, the City selected ENGIE Services U.S. (ENGIE) to help develop and implement the paid-from-savings efficiency program to retrofit interior and exterior lighting with high performing LED technology and implement efficiency measures including an extensive cogeneration project, aligning directly with the citywide sustainability goals.

## 3 DIMENSIONS OF IMPACT

ENGIE is committed to building three dimensions of impact in every customer's future:



Supporting People



Saving Money



Protecting the Environment

## Program Highlights

- Saved 3.6 million kWh per year
- Saved more than 260,000 therms of gas and 108 million gallons of water annually
- Saved nearly \$800,000 in energy costs annually
- Cogeneration plant energy efficiency upgrades and modernization
- Local labor and economic development impact: created 95 construction jobs and generated \$2MM in local economic activity through regional labor contracts
- Reduced annual greenhouse gas emissions equivalent to removing 535 passenger vehicles from Palm Springs roadways each year

## Technical Scope

- Retrofitted Sunrise Cogeneration Plant by converting the plant to a new conventional electric and cooling plant



### Technical Scope (continued)

- Retrofitted Municipal Cogeneration Plant
- Installed new utility metering, monitoring, and energy management systems (EMS) for City facilities connected to the Municipal and Sunrise Plants
- Installed centralized irrigation control system with weather stations for parks and other landscape areas
- LED installations including:
  - Palm tree lights on Palm Canyon Drive
  - Interior and exterior fixtures at the Palm Springs International Airport
  - Exterior fixtures at City-owned parking lots and parking structures

Through the rollout of this comprehensive energy program, the City of Palm Springs is saving 3.6 million kWh per year – translating to nearly \$800,000 in energy costs saved annually. A critical part of the long-term program was to align with the City's Sustainability Commission goals through innovative technology. As a result of reducing greenhouse gas emissions tied to improved efficiency of heating and water improvements for Palm Springs residents, the energy conservation measures implemented are the equivalent of removing 535 cars off the road every year.



### COGENERATION IN PALM SPRINGS

A primary focus of this program was to retrofit the City's cogeneration plant. Cogeneration is the sequential production of two energy forms, producing hot or cold water for air-conditioning or heating and electricity from a single fuel source (natural gas). In Palm Springs, the original City Municipal Cogeneration Plant, built in 1985, was an innovative installation utilizing cogeneration and thermal energy storage. The newly renovated plant has replaced the two older 650 kWh rich-burn engines with one 1,135 kWh lean-burn engine. Coupled with new chillers, cooling towers, and a new state-of-the-art control system, the new plant exceeds past performance to save energy while keeping City services accessible and resilient in the face of changing climate demands.

The Municipal Cogeneration Plant serves the following City facilities:

- Palm Springs Airport (uses 50% of the energy produced at the cogen plant)
- City Hall
- Airport Fire Station
- Palm Springs Police Department
- City's Operation Center
- Palm Springs Innovation Hub (CViHub)

