W SAN FRANCISCO HOTEL

San Francisco, CA

Retro-commissioning uncovers energy and cost saving opportunities even in a well-run building.

One of the first hotels of the W brand, the 31-story W San Francisco opened in 1999. Eight years later, NORESCO was able to identify energy and cost-saving opportunities through this retro-commissioning investigation conducted under the Retro-commissioning Services and Incentives Program funded by Pacific Gas and Electric.

The objective of the study was to identify deficiencies in the operation of the hotel's mechanical equipment, lighting, and related controls, and determine opportunities for corrective action and other operational improvements that reduce energy consumption and demand.

The building HVAC system consists of eight major air handling units, two chillers, two cooling towers, one chilled water distribution loop, two boilers, and a heating hot water loop. After monitoring and analyzing these systems, NORESCO identified the following opportunities for energy savings: addition of variable frequency drives to domestic water booster pumps, chillers, hot water pumps, and kitchen ventilation systems; optimization of condenser water pump pressure; implementation of static pressure reset schedules; repair of leaking valves; and calibration of an outdoor air temperature sensor. By implementing all eight suggested measures, the hotel can expect a 7% electrical and 4.3% gas annual cost savings.

Although there was no LEED® certification goal at the start of this project, the building has since begun to work towards a LEED-EB: O&M certification, with technical support provided by NORESCO.

Certification

- ENERGY STAR®
  2008

Services

- Retro-commissioning

Environmental Impact*

- 336,927 kWh annual electric savings
- 30 kW annualized peak demand savings
- 7% annual electrical cost savings
- 4,528 therms annual gas savings
- 4.3% annualized gas cost savings
- 209 metric tons annual CO2 reduction
- 4 years: simple payback period

* If all 8 suggested measures are implemented

Services for this project were provided by Architectural Energy Corporation (AEC), which is now part of NORESCO