

Pasadena Convention Center

Pasadena, California



Energy Performance Contract Greens the Pasadena Convention Center

The City of Pasadena, recognized as “one of America’s 50 greenest cities” by *Popular Mechanics* magazine, recently completed a \$150 million expansion project of its Pasadena Convention Center, which included the addition of numerous energy efficient upgrades designed to reduce the center’s carbon footprint and promote sustainability. The expansion, which nearly doubled the capacity of the facility, was planned and executed using green building principles.

Utilizing a \$3 million low-interest loan from the California Energy Commission and a \$1.5 million rebate from the local utility to fund the energy-efficiency improvements, the convention center’s operating agency – the Pasadena Center Operating Company – entered into a performance contract with Johnson Controls. A new, energy-efficient central plant ensures that the expanded facility operates without adding to Southern California’s electrical grid. Even though the project has added significant square footage to the facility, it was designed to perform 32 percent better than California’s energy-efficiency standards.

Challenges

- Decrease energy consumption to lower utility costs, reduce operating expenses, and minimize the Pasadena Convention Center’s impact on the environment.
- Implement sustainable initiatives and practices that demonstrate the convention center’s commitment to responsible environmental practices.
- Pay for the infrastructure upgrades in a fiscally prudent manner.



A total of 85 percent of the demolition materials from the expansion were recycled, including all metal and steel. The concrete rubble was ground up and used as fill. Building material with post-consumer content also was used. An aggressive recycling program is being implemented to manage waste from shows and day-to-day operations.

Johnson Controls Solutions

- Replace 12-year-old central plant equipment with new chillers that are up to 75 percent more efficient, replace 35-year-old chilled water air handlers with new energy-efficient units, implement an automated energy control system that monitors and manages equipment and lighting, and perform energy efficient lighting retrofits.
- Implement a wide variety of sustainable initiatives in the areas of electricity, water use, recycling, and traffic reduction.
- Utilize the Johnson Controls performance contracting model, which guarantees annual energy savings that will offset a California Energy Commission loan for energy efficiency upgrades – obtained at a low interest rate of 3.95 percent.

Results

- The City of Pasadena anticipates savings of nearly 2 million kilowatt-hours per year, or \$260,000 in energy costs, and a demand reduction of 605 kilowatts, with a financial payback of nine years.

- The Pasadena Convention Center anticipates receiving a LEED (Leadership in Energy and Environmental Design) Silver or higher certification from the U.S. Green Building Council.
- With total savings funding the project, the City of Pasadena expects to obtain savings of **\$5,189,088** over the 15-year contract term.

For employees, the facility features alternate transportation amenities, including bike storage and shower/changing facilities. Preferred parking for carpools and vanpools are being offered, as well as incentives for those using public transportation.