

Case study

California Environmental Protection Agency

Sacramento, California



New state office tower balances environmental and security concerns

The headquarters of the California Environmental Protection Agency (EPA) is a showcase for energy efficiency and a great example of federal-state-local government cooperation. The City of Sacramento turned vacant downtown property into a 25-story tower housing the EPA and other state agencies formerly scattered throughout the city. The State of California is leasing the building, with an option to purchase in 2025.

The 930,000-square-foot building is 26% more efficient than the state's energy code, reflecting well on its major tenant, the California EPA. The facility incorporates many environmentally sustainable features, such as maximum use of natural light for occupants, double-paned glass with an energy-efficient coating, precast concrete panels with sun shades, and over 700 rooftop solar collector units. Clearly, the project planners succeeded in creating a new office tower that takes a minimal toll on natural resources, yet maximizes occupant comfort. In 2003 the building was named the most energy efficient hi-rise in the country by the EPA's ENERGY STAR® program, and it earned a LEED® Platinum rating under the LEED-EB rating system.

Johnson Controls, Inc. played a key role in accepting responsibility for the energy efficiency, building security, indoor air quality and power distribution systems of the new facility – and saved money for the owner by doing so. The building management and security systems originally were to be contracted separately, but Johnson Controls demonstrated the financial benefits of having one firm design and install both. Savings were achieved through reduced project management costs, common wiring networks, and less administrative oversight required by the general contractor. The savings helped fund some of the extras that made this project a standout.

PROJECT DESIGN TEAM

Developer	Thomas Development Partners, Los Angeles, CA
General Contractor	Turner Construction Co., New York, NY
Architect	AC Martin Partners, Los Angeles, CA
Technology Contractor	Johnson Controls, Inc., Milwaukee, WI

“Johnson Controls provided leadership, professional expertise, design assistance and commitment – which were critical in meeting the timetable for occupancy.”

TERRY RICHARDS,
FORMER PROJECT EXECUTIVE
TURNER CONSTRUCTION



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“The work performed by Johnson Controls was first class in all respects. They helped make this a very smooth job that stayed on schedule and within budget.”

MICHAEL SMITH
SENIOR VICE PRESIDENT-
CONSTRUCTION
THOMAS DEVELOPMENT PARTNERS

Security is a prime concern

Security for a major government office building is of prime importance, and the California EPA headquarters in downtown Sacramento is no exception. State workers are protected by a powerful security system that restricts employees and visitors to designated areas of the building. Elevators are monitored by the security system, and turnstiles will be added in the central lobby to deny access to elevator areas for those without clearance. This will increase security, as well as the productivity of security guards who patrol the lobby.

Project stays on track and within budget

A major problem in construction today is the timely commissioning of building systems and having them pass inspection by local authorities. Johnson Controls added significant value in this respect by leveraging its extensive knowledge of multiple building systems.

For example, when the smoke control system would not clear smoke from a test floor in the time required by the fire marshal, the Johnson Controls installation team stepped in. After thoroughly analyzing the problem, they recommended a redesign of the air damper system. This solution accelerated the checkout of the important smoke control system, which is tied to the Johnson Controls Metasys® building management system.

“Johnson Controls provided leadership, professional expertise, design assistance and commitment – which were critical in meeting the timetable

for occupancy,” recalls Terry Richards, a Turner Construction project executive during construction.

The developer also was delighted. According to Michael Smith, senior vice president-construction, Thomas Development Partners: “The work performed by Johnson Controls was first class in all respects. They helped make this a very smooth job that stayed on schedule and within budget.”

Comfortable, energy-efficient facility

As a result, the California EPA and the other state agency tenants are enjoying a comfortable new building that is extremely cost-effective to operate. Through the work of Johnson Controls and other contractors – as well as the diligence of tenants – the building is 26% more efficient than the State of California’s revised 1998 code. It received a LEED-EB rating at the Platinum level.

The design team also took great care to ensure adequate indoor air quality. Carpeting, for example, is entirely free of volatile organic compounds (VOCs). And each floor has at least two air intakes, as opposed to one central duct in traditional installations. Indoor air quality and overall occupant comfort have a major impact on employee productivity, particularly in Sacramento’s summer months where temperatures and humidity run high.

From indoor air quality to energy efficiency to building security, the California EPA headquarters has set a new standard for superior office tower construction.