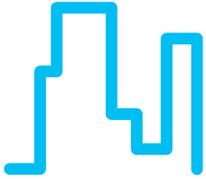


City of Houston

Houston, Texas



CUSTOMER BENEFITS

- Improved building occupant comfort
- Disaster hardening of critical systems
- Guaranteed savings
- Single source for renovations and results
- Holistic approach to problem solving
- Reduced energy costs

PROJECT AT A GLANCE

Project Type:

Performance contract

Location:

Houston, Texas, U.S.

Number of Buildings:

26 (2.8 million ft²)

Annual Savings:

\$2,518,417

Energy Conservation Measures:

- Central plant improvements
- Building management system additions/updates
- HVAC additions/updates
- Lighting fixtures and controls
- Water conservation fixtures
- Computer room HVAC
- Emergency power generation
- Retro-commissioning

Phase Completion

August 2012



Solutions provided by Schneider Electric translated to improved system reliability, shorter work order response time, reduced deferred maintenance backlog, local job creation, no increase in taxes, and great example set for citizens.

Summary

There is no denying, a vow to reduce and control energy consumption in the nation's fourth largest city is a Texas-sized challenge. For the city of Houston, Texas, partnering with the Clinton Climate Initiative's (CCI) Building Retrofit Program and implementing a performance contract with Schneider Electric™ have proven to be the recipe for green success.

The challenge

The city of Houston is located on the Gulf Coast, spans more than 600 square miles, and boasts a population of more than 2.1 million citizens. The city's employees operate out of more than 271 nonrevenue facilities, ranging in age and style with a total of 11 million square feet of space.

For many years, the city battled the increasing need for building repairs, most of which only treated the symptoms, rather than the cause of the problem. Work requests for buildings rose as systems aged and the deferred maintenance backlog grew. Enough was enough.

Faced with economic uncertainty, job loss, extreme drought, and challenging buildings, the city's administration found a way to address all of its issues and lead by example. In 2008, the city of Houston partnered with the Clinton Climate Initiative's (CCI) Building Retrofit Program.

CCI worked with the city to identify, design, and implement large-scale energy efficiency projects. At the suggestion of CCI, the city of Houston decided to explore performance contracting as a way to pay for facility repairs and renovations. Schneider Electric was chosen to execute the performance contract because of its ability to provide proactive, tailored solutions through state-of-the-art equipment and excellent customer service, all while guaranteeing energy savings.

Schneider Electric faced a variety of challenges while working on this project — from the complete replacement of the police headquarters' air handling units while maintaining a high level of security for the building ... to making all building upgrades in a timely manner, with no interruption to the services the city provides for its citizens. The Schneider

Electric team accepted these challenges and performed as expected. This point is summarized by Deputy Director of General Services, Steve Girardi, "we believe Schneider Electric to be a world-class organization. They conduct themselves with the utmost professionalism, they are very client-oriented, and they always deliver on schedule."

The solution

To date, Schneider Electric and the city decided to address efficiency, operation, and comfort needs in 26 buildings with square footage totaling 2.8 million square feet. Among others, improvements and upgrades were implemented in the city hall building, municipal courts, police headquarters, police academy, three police command centers, and a water purification plant.

The Schneider Electric project managers worked closely with the city's employees and representatives from CCI. This cooperative approach ensured goals were met and the facilities kept operational during the renovations. The city of Houston relied on Schneider Electric staff for their expert knowledge of building management systems and operations.



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Steve Girardi
Deputy Director of General Services

“Clients are often surprised that, after completion of the project, we place so much emphasis on making sure the performance continues through the years.”

Corey Newby
Director, Performance Assurance Support Services, Schneider Electric

Schneider Electric implemented energy conservation measures (ECMs), including: building management system upgrades and recommissioning, chiller plant replacements and redesign, boiler replacement and upgrades, HVAC replacement and upgrades, water conservation measures, lighting and lighting control upgrades, variable volume upgrades, common area daylight harvesting, and air handling unit replacements.

In some areas, the performance contract called for improving the control of the already efficient lighting, thus Schneider Electric installed state-of-the-art lighting controls, motion sensors, and efficient fixtures where possible. In addition, Schneider Electric capitalized on the use of ambient lighting in common areas, saving the city money.

In addition to technology upgrades, the Schneider Electric Performance Assurance Support Services (PASS) team has continued to work with the city staff after completion of the project. Ongoing commissioning and review of operational strategies are an important part of achieving enduring performance in a Schneider Electric performance contract. As stated by Corey Newby, Director of PASS, “clients hire Schneider Electric for our expertise in the area of efficient building improvements and operations. Clients are often surprised that, after completion of the project, we place so much emphasis on making sure the performance continues through the years. Clients seem to be accustomed to companies collecting their final payments, then looking to the next project. At Schneider Electric, it is our goal to always be

involved in helping our clients over the long term.” The city of Houston will continue to experience performance improvements throughout the life of the performance contract with Schneider Electric.

The bottom line

The performance contract provided a vehicle that enabled the city of Houston to proactively address its resource consumption issues immediately. The ECMs utilized by the performance contract with Schneider Electric have helped the city become an example to other cities and have taken it to the next level of efficient performance.

The immediate needs of the city of Houston were met. In addition, the performance contract provided jobs to local contractors, and taxpayers weren’t responsible for funding — internal bond releases and federal stimulus funds paid for the project. City water consumption and greenhouse gas emissions were slashed. Finally, system reliability and occupant comfort have increased dramatically as evidenced by work order requests to building engineers dropping significantly.

Schneider Electric guaranteed the city of Houston at least \$2,518,417 in operational and energy savings annually. Over the course of the 15-year contract, the city of Houston can expect to save over \$37 million. All in all, the solutions provided by Schneider Electric translated into improved system reliability, shorter work order response time, reduced deferred maintenance backlog, local job creation, no increase in taxes, and a great example set for citizens.

