

City of Fort Worth Engages Johnson Controls in Seven Phases of Performance Contracting Improvements



Project Size
\$69 million (seven phases)

Contract Term
**Varies from 9-15 years per phase
(2004 to 2026)**

Construction Period
Sept. 2003 to Dec. 2015

Project Savings
\$93 million

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The challenge: *Make 107 city facilities more energy-efficient and environmentally friendly, without raising taxes to do it*

Fort Worth, Texas is one of the fastest growing cities in the United States. Not only have population and commerce been increasing, but so has the cost of electricity and, therefore, the need to significantly improve the city's energy efficiency by reducing energy usage. Two things not allowed to grow in Fort Worth are capital expenses and taxpayer burden.

Nevertheless, the city needed to make substantial improvements to a large number of municipal facilities. Plus, Fort Worth wanted to comply with a state Senate bill that set a goal of a 5% reduction in annual electricity consumption in all municipal facilities by 2013. This was a tall order, even for a city as rugged and resilient as Fort Worth.

The solution: *A multi-year, multi-phase program of energy efficiency upgrades*

Fort Worth continued its pursuit of energy savings back in 2003 by working with Johnson Controls on energy efficiency improvements to City Hall and a few other municipal buildings. Based on the success of that first project, the city embarked on six additional phases with Johnson Controls that will run through 2026. The project includes energy efficiency retrofits and upgrades at municipal buildings and facilities in almost every department, including office space, police stations, fire stations, libraries, community centers, convention center, airport terminal, arenas, and wastewater treatment plant. A total of 107 facilities comprising over four million square feet of space are being improved.

Although Johnson Controls has worked with many municipalities on energy efficiency improvements, this is a project of unprecedented size and scope, including:

- Solar PV systems at five facilities and solar thermal systems at three facilities
- Innovative conversion of digester gas and waste heat to power two 1000-HP steam-driven blowers at the wastewater treatment plant



Johnson Controls has helped secure more than \$2.2 million in utility rebates to offset the cost of the first six phases. Additional utility rebates are expected.

- Retrofitting lighting systems with more efficient equipment and controls
- Replacing old chillers and boilers with new high-efficiency equipment
- Upgrading to more energy-efficient air-conditioning systems and equipment
- LEED EB certification
- Installing low-flow plumbing fixtures, flush-valves, aerators, and pedal-valves
- Converting old spray-head irrigation to drip-type systems
- Deploying the Metasys building management system to monitor, control, and optimize building systems
- Power factor correction

To pay for many of these projects without increasing capital expenditures or taxpayer burden, Johnson Controls helped Fort Worth obtain financing and grants from the State Energy Conservation Office (SECO) Texas LoneSTAR program, DOE American Recovery and Reinvestment Act (ARRA) program and external sources. Johnson Controls has helped secure more than \$2.2 million in utility rebates through the first six phases.

Results and Benefits

The retrofits, upgrades and other improvements throughout the 107 municipal facilities will reduce electricity consumption by about 36%. Johnson Controls is guaranteeing \$93 million in savings for all seven phases combined. To date, we are exceeding the guarantee by more than 40%.

Fort Worth is able to finance these projects without spending capital funds and without raising taxes. The city can invest its positive cash flow in other much-needed programs to better serve local residents and businesses.

Whether it's creating a more livable, sustainable city; delivering better city services; or holding the line on taxes, Fort Worth is a city that works.