

The City of Port Arthur, Texas, has celebrated more than 100 years as a Gulf Coast city, and is home to approximately 60,000 residents. Located in Jefferson County on the western bank of Sabine Lake, Port Arthur is a significant part of the energy center that makes up the Texas and Louisiana Gulf Coast.

Like many other communities across the U.S., Port Arthur has been challenged by the economy and looked to Siemens Industry, Inc., to help identify opportunities to reduce utility and operational costs while maintaining capital and taxpayer funds. With a staff and council focused on ways to provide better services to its citizens, they set out with a goal to improve the City's aging infrastructure.

Client Objectives

The City of Port Arthur engaged Siemens to conduct an investment-grade audit of the City's infrastructure. The City wanted Siemens to identify facility improvement measures that would:

- Address needed facility updates
- Improve the energy efficiency of city facilities
- Reduce utility and operational costs
- Minimize impact on capital funds

In late 2011, Siemens presented the audit results to the City of Port Arthur, and in early 2012, the City decided to move forward with a selection of facility improvement measures.

The City of Port Arthur will realize approximately \$200,000 in annual energy and operational savings

Siemens Solution

Siemens and the City of Port Arthur will implement a variety of infrastructure and energy improvements as part of a 15-year energy performance contract (PC). PC is a procurement methodology that allows the city to retain its capital funds, utilize energy and operational savings to fund facility improvements, and benefit from guaranteed energy savings through a relationship with a dedicated energy services partner.

Siemens will implement the following solutions for Port Arthur:

- Upgrade approximately 5,500 total light fixtures to more efficient technologies, including LED and fluorescent lamps. Siemens will also retrofit exit signs and place occupancy sensors to further reduce energy consumption.
- Replace numerous HVAC units (older air-cooled chillers, DX rooftop units, and natural gas fueled boilers) with new, energy-efficient technologies.
- Replace existing pneumatic building controls with a distributed digital energy management controls system that also allows for equipment scheduling based on building occupancy and other energy optimization strategies.
- Retrofit traffic signals, City-wide across 76 intersections, with energy-efficient LED modules.

In addition to the above improvements, Siemens will also complete a leak detection survey to quantify real water losses in the city's water distribution piping infrastructure.

Client Results

Siemens began implementing facility improvement measures in the fall of 2012. When all improvements are complete, Siemens estimates that the City of Port Arthur will realize approximately \$200,000 in annual energy and operational savings. These savings are guaranteed by Siemens over the course of the 15-year performance contract.





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