

## Alexandria Sanitation Authority (ASA)

### Energy Savings Performance Contract (ESPC)



The Alexandria Sanitation Authority's (ASA) main wastewater treatment facility is a 54 million gallon/day, high tech, wastewater treatment plant. The Authority had recently completed a \$250 million plant upgrade and, due to rising utility costs, was looking for additional energy cost saving measures.

The facility consists of 20 buildings measuring 708,495 square feet and used natural gas to operate the pasteurization flare involved in the wastewater treatment process. RWE Clean Energy, through its subsidiary, Custom Energy Services, successfully redirected the digester gas that is given off as a by-product of the wastewater treatment process to the pasteurization flare. This allows Alexandria Sanitation Authority to maintain their wastewater treatment process while still reducing natural gas costs.

Several of the facility's natural gas boilers were also upgraded. In addition to these natural gas boilers, two electric boilers were installed. The electric rates in the Alexandria area are such that it is cheaper to use electricity during off-peak hours than natural gas. By installing electric boilers, the Alexandria Sanitation Authority could take advantage of these off-peak electric savings.



#### PROJECT DATA

##### Location

Alexandria, VA

##### Construction Size

May 2008 to July 2009

##### Capital Cost

\$5,949,588

##### Annual Savings

\$308,495

##### Environmental Benefits

546 tons of harmful greenhouse gas emissions reduced annually

Equivalent to:

- Preserving 3.5 acres of forest from deforestation\* or
- Conserving 1,151 barrels of oil\*

\*Sources:

- Leonardo Academy's Cleaner & Greener<sup>SM</sup> Emissions Reduction Calculator: <http://www.cleanerandgreener.org/resources/pollutioncalculator.html>
- U.S. Environmental Protection Agency, Greenhouse Gas Equivalencies Calculator: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>

“Custom Energy Services (a RWE Clean Energy) has been an excellent partner in advancing our organizational goals for energy efficiency.

...Through each step of the audit and conceptual design, Custom Energy Services maintained a collaborative atmosphere and established efficient lines of communication with ASA.

...The concepts of energy auditing, design build, and performance contracting were new to ASA. Custom Energy Services kept this in mind and provided the correct amount of workshops, meetings, and walkthroughs to make sure ASA was keeping pace with the audit and design.”

Paul Carbary  
Director of Green Fields  
Alexandria Sanitation Authority



## PROJECT DATA

### ENERGY CONSERVATION MEASURES

- Lighting System Upgrades
- Installing natural gas boilers
- Installing electric boilers for steam generation
- Modify pasteurization flare to burn digester gas
- Retrofit steam traps