



## Case Study

### Alexandria Sanitation Authority (ASA)

Alexandria, VA



#### PROJECT HIGHLIGHTS

##### 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\*

##### Capital Costs

\$5,949,588

##### Annual Savings

Energy: \$266,772

Non-energy: \$41,723

Utility cost reduction: 7%

##### \*Sources:

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

#### PROJECT DESCRIPTION

**Challenge:** 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.

#### PROJECT SCOPE

**Solution:** 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. ConEdison Solutions, 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 will also be upgraded. In addition to these natural gas boilers, two electric boilers will be 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.

#### Contact:

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Director of Green Fields  
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Alexandria, VA 22314  
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#### Construction start date:

May 2008

#### Construction end date:

July 2009 (estimated)

#### ENERGY CONSERVATION MEASURES

Lighting system upgrade

Installing natural gas boilers

Installing electric boilers for steam generation

Modify pasteurization flare to burn digester gas

Retrofit steam traps

**"Custom Energy Services (a ConEdison Solutions company) 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 Carbarly  
Director of Green Fields  
Alexandria Sanitation Authority

## Clients: State & Municipal, Museums



### STATE AND MUNICIPAL

**Alexandria Sanitation Authority**, VA  
**Arlington County**, VA  
**Bergen County Utility Authority**, Little Ferry, NJ  
**Brevard County**, FL  
**Buchanan County**, MO  
**Cape and Vineyard Electric Cooperative**, MA  
**Charlotte County**, Port Charlotte, FL  
**City of Boca Raton**, FL  
**City of Charlottesville**, VA  
**City of Concord**, NH  
**City of Ft. Myers**, FL  
**City of Fort Pierce**, FL  
**City of Hialeah**, FL  
**City of Kerman**, CA  
**City of Miami Springs**, FL  
**City of New Bedford**, MA  
**City of Newport Richey**, FL  
**City of Northampton**, MA  
**City of Pittsburg**, KS  
**City of Punta Gorda**, FL  
**City of Riverton**, WY  
**City of Tallahassee**, FL  
**City of Temple Terrace**, FL  
**City of Winter Haven**, FL  
**City of Ybor**, FL  
**Colorado Convention Center**, Denver, CO  
**Connecticut Department of Motor Vehicle**, Wethersfield, CT  
**Dept. of Environmental Protection**, Tallahassee, FL  
**Dept. of Management Services**, Miami, FL  
**Essex and Union Counties**, NJ

**Falmouth Youth Hockey Rink**, Falmouth, MA  
**Florida Dept. of Military Affairs**, St. Augustine, FL  
**FL. Division of Fruits & Vegetables**, Winter Haven, FL  
**Goshen County**, Torrington, WY  
**Georgia Environmental Finance Authority**, Atlanta, GA  
**Hernando County Government**, Brooksville, FL  
**Kansas Insurance Department**, Topeka, KS  
**Little Quittacas**, Rochester, MA  
**Loudoun County**, VA  
**Martin County**, Stuart, FL  
**Miami-Dade County**, FL  
**Middlesex Water Company**, NJ  
**Missouri State Fairgrounds**, Sedalia, MO  
**New Hampshire Department of Administrative Services**, Concord, NH  
**New York Power Authority**, NY  
**Padelford**, Berkley, MA  
**Plant City Public Works**, PA  
**Polk County Government**, Bartow, FL  
**Rhode Island Airport**, RI  
**Southbridge Water Department**, Southbridge, MA  
**St. Lucie County**, Fort Pierce, FL  
**Sedgwick County**, Wichita, KS  
**Suwannee County**, Live Oak, FL  
**Town of Dubois**, WY  
**Trenton Water Works**, Trenton, NJ

### CORRECTIONAL FACILITIES

**Arlington County Justice Center**, VA  
**El Dorado Correctional Facility**, KS  
**Jefferson City Sheriff's Dept.**, Golden, CO  
**Lansing Correctional Facility**, KS  
**Norton Correctional Facility**, KS  
**Winfield Correctional Facility**, KS

### MUSEUMS/NON PROFITS

**John F. Kennedy Presidential Library and Museum**, Boston, MA  
**Museum of Science and Industry**, Tampa, FL  
**U.S. Naval Museum**, Washington, D.C.  
**USS Intrepid Sea, Air and Space Museum**, New York, NY  
**YMCA (North Shore)**, Beverly MA, including: Ipswich, Haverhill, Marblehead, and Salem