



# 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.cleanerandgreener.org/resources/emission\\_reductions.htm](http://www.cleanerandgreener.org/resources/emission_reductions.htm)
- 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  
 1500 Eisenhower Avenue  
 Alexandria, VA 22314  
 703.549.3382 ext.2267

#### 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 Carbarry  
 Director of Green Fields  
 Alexandria Sanitation Authority



## Clients: Government & Non Profit Groups

### FEDERAL

**Federal Aviation Administration**  
New England Region,  
Burlington, MA

**General Services Administration,**  
New York, NY

**General Services Administration**  
Department of Justice,  
Dallas, TX

**General Services Administration**  
Federal Court House Building,  
Fort Lauderdale, FL

**General Services Administration**  
Internal Revenue Service,  
Farmers Branch, TX; Kansas City, MO

**General Services Administration**  
Northeast Region,  
Boston, MA

**General Services Administration**  
R.L. Timberlake, Jr. Federal Building,  
Tampa, FL

**National Archives and Records**  
Administration,  
Boston, MA

**Veterans Administration**  
VISN #3, New York City Medical Center  
New York, NY

### STATE AND MUNICIPAL

**Alexandria Sanitation Authority, VA**

**Arlington County, VA**

**Bergen County Utility Authority,**  
Little Ferry, NJ

**City of Baltimore, MD**

**City of Baltimore, Fire Department, MD**

**City of Boca Raton, FL**

**City of Charlottesville, VA**

**City of Ft. Myers, FL**

**City of Hialeah, FL**

**City of Parsons, KS**

**City of Pittsburg, KS**

**City of Tallahassee, FL**

**City of Temple Terrace, FL**

**City of Winter Haven, FL**

**City of Ybor, FL**

**Essex and Union Counties, NJ**

**Florida Department of Environmental**  
Protection,  
Tallahassee, FL

**Florida Department of Management**  
Services,  
Miami, FL

**Hernando County Government,**  
Brooksville, FL

**Kansas Insurance Department,**  
Topeka, KS

**Miami-Dade County,**  
Miami, FL

**Middlesex Water Company,**  
Middlesex, NJ

**Missouri State Fairgrounds,**  
Sedalia, MO

**New York Power Authority**  
(various locations),  
New York, NY

**Pittsburgh Housing Authority,**  
Pittsburgh, PA

**Plant City Public Works,**  
Plant City, PA

**Polk County Government,**  
Bartow, FL

**Southbridge Water Department,**  
Southbridge, MA

**St. Lucie County,**  
Fort Pierce, FL

**State FL-Division of Fruits & Vegetables,**  
Winter Haven, FL

**Suwannee County,**  
Live Oak, FL

**Trenton Water Works,**  
Trenton, NJ

### CORRECTIONAL FACILITIES

**El Dorado Correctional Facility, KS**

**Hutchinson Correctional Facility, KS**

**Lansing Correctional Facility, KS**

**Norton Correctional Facility, KS**

**Winfield Correctional Facility, KS**

### U.S. POSTAL SERVICE

**Atlanta Bulk Mail Center, GA**

**Atlanta Georgia Facilities, Group 1 and 2,**  
Crown Road Facility,  
Hapeville, GA

**Kilmer Processing and Distribution,**  
Edison, NJ

**Morgan Processing and Distribution**  
Center,  
New York, NY

**USPS-Central Florida District, FL**

**USPS-Suncoast District, FL**

**Whippany Processing and Distribution**  
Center,  
Kearney, NJ

**SES Contracts awarded for: CA, AZ, NV,  
HI, Guam, CO, WY, UT, ID, OR, WA and  
AK**

### U.S. MILITARY

**Florida Department of Military Affairs**

**Hanscom Air Force Base,**  
Bedford, MA

**MacDill Air Force Base,**  
Tampa, FL

**National Naval Medical Center,**  
Bethesda, MD

**Naval Air Station,**  
Jacksonville, FL

**Tyndall Air Force Base,**  
Panama City, FL

**U.S. Army Garrison at Fort Hamilton,**  
Brooklyn, NY

**U.S. Army Reserves,**  
New York, NY

**U.S. Coast Guard,**  
Boston, MA

**U.S. Navy, District of Washington**

**Anacostia Annex,**  
Washington, D.C.

**U.S. Navy, Washington Navy Yard,**  
Washington, D.C.

### MUSEUMS

**John F. Kennedy Presidential Library**  
and Museum,  
Boston, MA

**U.S. Naval Museum,**  
Washington, D.C.

**Museum of Science and Industry,**  
Tampa, FL

**USS Intrepid Sea, Air and Space Museum,**  
New York, NY