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:
Paul Carbary
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)

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%

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 Carbary
Director of Green Fields
Alexandria Sanitation Authority

*Sources:
• Leonardo Academy’s Cleaner & GreenerSM Emissions Reduction Calculator
  http://www.cleanerandgreener.org/resources/emissions_reduction.htm
• U.S. Environmental Protection Agency, Greenhouse Gas Equivalencies Calculator
  http://www.epa.gov/cleanenergy/energy-resources/calculator.html
FEDERAL

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
Swannee County,
Live Oak, FL
Trenton Water Works,
Trenton, NJ

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

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

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

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