



# Case Study

## Charlottesville City and Schools Charlottesville, VA



### PROJECT HIGHLIGHTS

#### Environmental Benefits

1,996 tons of harmful greenhouse gas emission reduced annually

#### Equivalent to:

- Preserving 12.6 acres of forest from deforestation\* or
- Conserving 4,210 barrels of oil\*

#### Capital Costs

\$1,835,893

#### Annual Savings

\$198,059

#### Annual Utility Cost Reduction

10%

**\*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>

### PROJECT DESCRIPTION: Energy Savings Performance Contract

**Challenge:** The City of Charlottesville's utility costs increased 35% in a single year. With the rising cost of energy, the city faced a potentially significant impact on budgets now and into the future. This project involved 32 buildings, which included all the major municipal buildings (city hall, courthouse, detention center, central fire station, library, parks and recreation, etc.) and nine schools, totaling 1,478,499 square feet.

### PROJECT SCOPE:

**Solution:** ConEdison Solutions, was able to help the city decrease energy consumption and save taxpayer dollars by implementing lighting upgrades and water conservation measures.

In addition to those measures, a solar water heating system was installed in the city's fire station. Since the fire station is occupied twenty-four hours a day, seven days a week, there is a large demand for hot water. The water heaters in the facility use natural gas to heat the water. The solar hot water system uses the energy from the sun to preheat the water. This allowed the city to reduce the amount of natural gas needed to heat the water to the appropriate temperature.

#### Contact:

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Facilities Maintenance Manager  
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Charlottesville, VA 22902  
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**Construction start date:**  
May 2008

**Construction end date:**  
October 2008

### ENERGY CONSERVATION MEASURES

Lighting System Upgrade

Installed Solar Water Heater

Water Conservation

"...ConEdison Solutions performed a Technical Energy and Water Savings Audit of all the buildings in the City of Charlottesville, VA. ...Using the audit recommendations to justify project return on investment, the City initiated approximately \$1 million in much-needed capital improvements. The City also executed an energy performance contract with ConEdison Solutions for an additional \$1.8 million of recommended improvements. We consider this a great success story. Our actual energy savings have exceeded what was guaranteed, resulting in immediate savings to our taxpayers. We now expect our investment to be returned within 7 years.

...I have been extremely impressed with the team assigned by ConEdison Solutions. They have proven to be knowledgeable, flexible, detail-oriented professionals, whose first concern is always my first concern."

Lance Stewart  
Facilities Maintenance Manager  
City of Charlottesville, VA



## 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