



# Case Study

## Emporia Unified School District 253 Emporia, Kansas



### PROJECT HIGHLIGHTS

#### Environmental Benefits

2,234 tons of harmful greenhouse gas emissions reduced annually

#### Equivalent to:

- Preserving 20 acres of forest from deforestation\* or
- Conserving 4,736 barrels of oil\*

#### Capital Costs

\$4,346,209

#### Annual Savings

Energy: \$179,918  
Non-Energy: \$55,610  
Utility Cost Reduction: 20%

#### \* 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 Emporia Unified School District chose to partner with ConEdison Solutions to resolve challenges presented by limited funding resources, rising utility costs, and end of life equipment issues. The primary objective in implementing a project through the Facility Conservation Improvement Program (FCIP) was to reduce energy usage, energy costs, and related operational expenses, and redirect those budgeted funds to pay for facility improvements.

### PROJECT SCOPE:

**Solution:** ConEdison Solutions accomplished the project goals through the installation of new energy-efficient lighting equipment and HVAC systems, and the modernization and upgrade of building envelope measures. We evaluated numerous measures that spanned almost every facility in the district. This information was then used to develop a list of energy conservation measures and facility improvements that are self-funding through energy and operational savings. Savings projections were calculated through a combination of design engineering and field data collected from measuring and monitoring equipment. In addition, input from facility personnel helped to develop the operational run hours and the operating procedures used for the facility and the major energy-consuming equipment.

#### Contact:

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#### Construction Start Date:

November 2009

#### Construction End Date:

August 2010

### ENERGY CONSERVATION MEASURES

#### Lighting

- High efficiency lighting

#### Building Controls

- Vending machine
- Occupancy-based outside air
- Engine block heater

#### Heating and Cooling

- Boilers
- Fresh air units
- Rooftop units
- Steam trap valves
- Pipe insulation

#### Building Envelope

- Windows
- Suspended ceilings
- Solar screens on windows

#### Water Conservation

- Low-flow water fixtures
- Artificial field turf



## Clients: K-12 Schools

<b>Baker County Schools</b> Macclenny, FL	<b>Foster-Glocester Regional School District and Ponaganset Middle &amp; High School (2 schools)</b> Foster, RI	<b>Mahopac Central School District</b> Mahopac, NY	<b>Putnam County Schools</b> Palatka, FL
<b>Bay County Schools</b> Panama City, FL	<b>Franklin County School Board</b> Apalachicola, FL	<b>Manatee County Schools</b> Bradenton, FL	<b>Queen Creek School District</b> Queen Creek, AZ
<b>Bradford County Schools</b> Starke, FL	<b>Garden City School District</b> Garden City, NY	<b>Maries County School District</b> Belle, MO	<b>Raymore-Peculiar School District</b> Peculiar, MO
<b>Bluestem Unified School District #205</b> Leon, KS	<b>Hardee County Schools</b> Wauchula, FL	<b>Martin County Schools</b> Stuart, FL	<b>Santa Rosa County Schools</b> Milton, FL
<b>Buhler Unified School District #313</b> Buhler, KS	<b>Harrisonville Cass R-IX School District</b> Harrisonville, MO	<b>Monroe County Schools</b> Key West, FL	<b>Sarasota County Schools</b> Sarasota, FL
<b>Calhoun County Schools</b> Blountstown, FL	<b>Haven Unified School District #312</b> Haven, KS	<b>Nassau County Schools</b> Fernandina, FL	<b>School Board of Pinellas County</b> Largo, FL
<b>Charlotte County Public Schools</b> Port Charlotte, FL	<b>Hendry County Schools</b> Labelle, FL	<b>Newport Public Schools</b> Newport, RI	<b>Scott County Unified School District #466</b> Scott City, KS
<b>Charlottesville City Schools</b> Charlottesville, VA	<b>Highland County Schools</b> Sebring, FL	<b>Northampton Public Schools</b> Northampton, MA	<b>Smithville R-11 School District</b> Smithville, MO
<b>Clay County Schools</b> Keystone Heights, FL	<b>Hillsborough County Public Schools (10 schools)</b> Tampa, FL	<b>North Jackson Unified School District #335</b> Holton, KS	<b>Springfield Public Schools</b> Springfield, MO
<b>Collier County Schools</b> Naples, FL	<b>Humboldt Unified School District #258</b> Humboldt, KS	<b>Okaloosa County Schools</b> Fort Walton Beach, FL	<b>St. John's County Schools</b> St. Augustine, FL
<b>Columbia County Schools</b> Lake City, FL	<b>Indian River Schools</b> Vero Beach, FL	<b>Okeechobee County Schools</b> Okeechobee, FL	<b>Suwannee County Schools</b> Live Oak, FL
<b>Columbia Public Schools</b> Columbia, MO	<b>Jackson County Schools</b> Marianna, FL	<b>Osceola School District</b> Kissimmee, FL	<b>Walton County Schools</b> DeFuniak Springs, FL
<b>Dade County Schools</b> Miami, FL	<b>Lake County Schools</b> Tavares, FL	<b>Palm Beach County Schools</b> West Palm Beach	<b>Washington County Schools</b> Chipley, FL
<b>Desoto County Schools</b> Arcadia, FL	<b>Lee County School District</b> Ft. Myers, FL	<b>Park Hill School District</b> Kansas City, MO	<b>Windham Public Schools (6 schools)</b> Windham, CT
<b>Emporia Unified School District 253</b> Emporia, KS	<b>Leon County Schools</b> Tallahassee, FL	<b>Piper Unified School District #203</b> Kansas City, KS	
<b>Escambia County School District (65 schools)</b> Pensacola, FL		<b>Polk County Schools</b> Bartow, FL	
		<b>Port Charlotte County</b> Port Charlotte, FL	