



# Case Study

## Wichita State University Wichita, KS



### PROJECT HIGHLIGHTS

#### Environmental Benefits

16,132 tons of harmful greenhouse gas emissions reduced annually

#### Equivalent to:

- Preserving 120 acres of forest from deforestation\* or
- Conserving 34,035 barrels of oil\*

#### Capital Costs

\$12,316,635

#### Annual Savings

\$1,103,277 (Energy)

\$15,000 (Non-Energy)

#### \* 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: Facility Conservation Improvement Program

**Challenge:** Wichita State University was faced with sharp increases in utility costs that threatened to impact other programs and budgets. They decided to utilize the State of Kansas' Facility Conservation Improvement Program (FCIP) to help solve the problem. The university asked ConEdison Solutions, through its subsidiary Custom Energy Services, to evaluate the benefits of more than 200 energy efficiency and facility improvement measures. That list was trimmed slightly for the final project, but the vast majority of the improvements were included.

### PROJECT SCOPE

**Solution:** The project size consists of 49 buildings measuring 1,976,646 square feet. Among the major upgrades are new equipment and optimization of the boiler and chiller plant, lighting, expansion and enhancement of the energy management system, steam traps, variable speed and flow devices, and a multitude of other improvements. The project resulted in over a million dollars in annual savings, and greatly improve the comfort of the learning environment in 49 buildings.

#### Contact:

Woodrow DePontier  
1845 Fairmount Street  
Wichita, KS 67260  
316-978-3447

#### Construction Start Date:

February 2006

#### Construction End Date:

May 2007

### ENERGY CONSERVATION MEASURES

Lighting system upgrade

Energy management system

Boiler replacement

Vending machine controls

Water conservation

Vending machine controls

Installation of variable frequency drives on boiler feedwater pumps

Replace deaerator tank and feedwater pumps

Installation of pool covers

Replace absorption chiller

Installation of two-way control valves

Domestic water pump control

Replace steam traps

Increase cooling tower capacity