



Case Study

Winfield Correctional Facility Winfield, KS



PROJECT HIGHLIGHTS

Environmental Benefits

2,370 tons of harmful greenhouse gas emissions reduced annually

Equivalent to:

- Preserving 15 acres of forest from deforestation* or
- Conserving 5,000 barrels of oil*

Capital Costs

\$1,425,639

Annual Savings

Energy:	\$154,342
Non-Energy:	\$20,604
Utility Cost Reduction:	23.7%

* Sources:

- Leonardo Academy's Cleaner & GreenerSM Emissions Reduction Calculator
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

Energy Savings Performance Contract

Challenge: The Winfield Correctional Facility is a minimum-security prison that has a population of 779 inmates. The plant and steam distribution system serves most of the facility's space heating, domestic hot water, and laundry steam requirements. This requires year round operation of the plant, and one of the main boilers was not functioning. Another area of energy concern was the lighting. The entire facility was using old, inefficient lighting, thus wasting a lot of energy.

PROJECT SCOPE

Solution: Specific improvements at Winfield Correctional Facility include new lighting, toilets, showerheads, faucet aerators, boilers, an energy management system, and a laundry system. No up-front capital was required; instead the facilities will use over \$1.4 million in energy savings from the improvements to pay for the project over ten years. Taxpayers won't be charged a dime, while the staff, patrons, and inmates benefit from a wide variety of infrastructure and operational enhancements.

Contact:

Dan Durbin
Business Manager
1806 Pinecrest Circle
Winfield, KS 67156
620-221-6660 ext. 311

Construction Start Date:

October 2003

Construction End Date:

March 2004

ENERGY CONSERVATION MEASURES

Lighting

- High efficiency lighting
- LED exit signs
- Occupancy sensors

Controls

- Energy management system
- Kitchen exhaust hood control

Heating and Cooling

- Boiler
- Steam traps
- Variable air volume conversion

Fuel Conversion

Kitchen appliances

Water

- Water soft system installation
- Low-flow water fixtures

Other

Laundry ozone system