

retrocommissioning project one

National Soybean Research Center



Quick Facts...

Total Building Square Feet:	98,854
Expected Utility Savings per Year:	>\$65,000
RCx Spent to Retrocommission:	\$186,000
Estimated Payback:	2.5 yrs
RCx Team in Building:	Aug. to Sep. 2007

Green House Emissions Reduction:

The 21 Tons of CO2 saved is equivalent to the emissions from 2,383 gallons of gasoline!*

*based on <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>)

How savings were achieved:

- Reduced number of operational hoods to limit amount of outside air requiring conditioning
- Reviewed cooling control logic and adjusted it to improve ability to use outside air without sacrificing occupant comfort
- Added insulation to prevent waste heat or cooling
- Provided color-coded floor plans to the Building Operator to assist the occupants with controlling the temperature in their own space

Project Highlights

- ▶ Numerous temperature control operational problems were identified & corrected. VAV box controls were re-viewed.
- ▶ Shut down unnecessary exhaust systems
- ▶ Provided DDC Controls and web graphics for remote troubleshooting
- ▶ Enhanced humidity control thereby saving chilled water and steam utility costs
- ▶ Occupancy schedules incorporated for air handling unit operation and electrical savings
- ▶ Shut down (3) fume hoods
- ▶ Restored occupant confidence in temperature control
- ▶ Documentation provided to building occupants to assist in maintaining the savings
- ▶ Temperature control compressed air systems were consolidated

Current Calculated Energy Savings*:

Electrical energy saved: **1%**

Chilled water energy saved: **43%**

Steam energy saved: **7%**

* based on comparison of monthly utility data from Sept. 2006 to June 2007 vs. Sept. 2007 to June 2008.