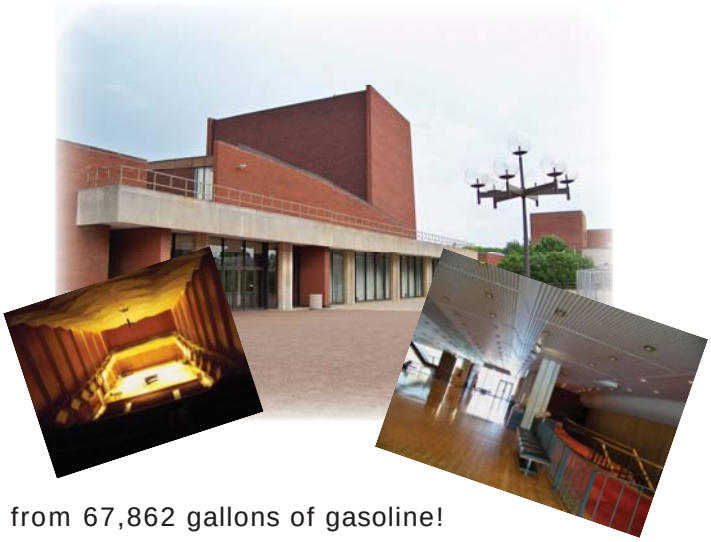
Facilities & Services
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

retrocommissioning project two

Krannert Center for the Performing Arts



Quick Facts...

Total Building Square Feet:	298,320
Expected Utility Savings per Year:	$376,000
RCx Spent to Retrocommission:	$188,000
Estimated Payback:	6 months
RCx Team in Building:	Oct. to Dec. 2007

Green House Emissions Reduction:
The 598 Tons of CO2 saved is equivalent to the emissions from 67,862 gallons of gasoline!
*based on http://www.epa.gov/cleanenergy/energy-resources/calculator.html)

How savings were achieved:

- Reviewed and analyzed the actual design and performance of the air handling units to enhance performance
- Installed programmable controls to reduce energy and air quantities in vacant theaters
- Installed carbon dioxide (CO2) sensors to deliver the minimum amount of outside air to satisfy the patrons while saving energy
- Addressed a variety of additional maintenance items which also contributed to savings

Current Calculated Energy Savings*:

Electrical energy saved: **18%**

Chilled water energy saved: **19%**

Steam energy saved: **55%**

* based on a comparison between the estimated average monthly utility data from Oct. 2005 to June 2007 vs. Oct. 2007 to June 2008 (In June 2008 the building had chilled water and reheat problems with abnormal increase in both.)

Project Highlights

▶	Capitalized on occupant diversity in theaters to create schedules to shut down mechanical equipment when & where possible
▶	Satisfied indoor air comfort using CO2 sensors, reducing the quantity of outside air
▶	Provided DDC Controls and web graphics for remote programming and adjusting
▶	Enhanced humidity control thereby saving chilled water and steam utility costs
▶	Recommended use of occupancy sensors for lighting control in practice theaters
▶	Replaced many thermostats for better temp control
▶	Many maintenance items were cared for: leaking coils, damper actuation, plugged and dirty ductwork, calibration of controls, etc...