

WALTON OUTREACH

APPLIED SUSTAINABILITY CENTER



UNIVERSITY OF
ARKANSAS
SAM M. WALTON
COLLEGE OF BUSINESS
Applied Sustainability Center

"This project is a great example of the significant energy savings that are possible by focusing on the operation of existing commercial buildings."

-James Hess, PE, CEM, BEMP;
Energy Engineer
TME, Inc.



An Energy Efficiency Success Story:

The Clinton School of Public Service

Project Overview:

The Clinton School of Public Service is located in downtown Little Rock, Arkansas, with facilities on the grounds of the William J. Clinton Presidential Center and in the heart of the city's River Market District.

The Clinton School's main campus is located at Sturgis Hall in the historic Choctaw Station of the Rock Island Railroad built in 1899. A generous grant from the Roy and Christine Sturgis Charitable and Educational Trust funded the renovation of the Choctaw Station, and the building was dedicated as Sturgis Hall upon its opening in fall 2004. In 2010, through the American Recovery and Reinvestment Act of 2009, the Clinton School was able to undergo an energy efficiency retrofit.

With an initial investment of \$283,000 and a

payback of only 8.6 years, the Clinton School's retrofits are saving them 50% each month, over \$30,000/year on their utility bills. The overall goal of this project is to have this building LEED Existing Buildings (EB) Certified by the end of 2012. If accepted, the Clinton School will be the oldest certified LEED (EB) building.

Upgrades:

- Upgraded lighting controls using motion sensors
- Upgraded building HVAC controls using motion & CO2 sensors
- Attic insulation
- Installed Energy dashboard for public viewing

University of Arkansas

Clinton School of Public Service

Location: Little Rock, Arkansas

Built: 1899 Retrofitted: 2010

Size of building: 23,803 sq. ft.

Pre Retrofit Usage= 976,740 kWh/year

Post Retrofit Usage= 461,360 kWh/year

SAVINGS: 515,350 kWh/year

Pre Retrofit Daily Usage= 2,676 kWh/day

Post Retrofit Daily Usage= 1,264 kWh/day

SAVINGS: 1,412 kWh/day

Pre Retrofit Cost= \$68,875/year

Post Retrofit Cost= \$35,040/year

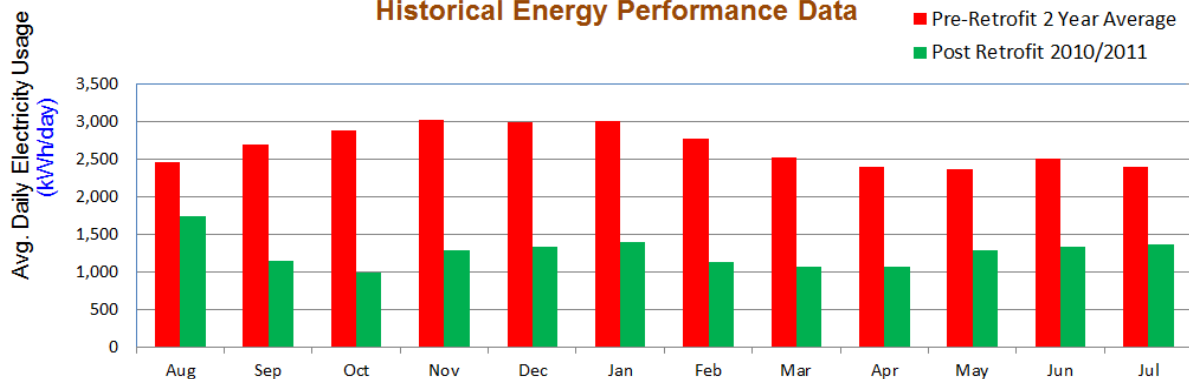
SAVINGS: \$33,835/year

Strategies for Success

- Electrical metering installed to sub-meter all major electrical end users, including total building, total lighting, total cooling, total heating, total ventilation fans, and total miscellaneous electricity usage.
- The building EMS was upgraded to include the use of advanced occupancy and CO2 sensors to control lighting and HVAC.
- Hardware and programming was implemented to adjust the operations of HVAC systems based on actual occupancy and needs, thus creating a “smart” building that can sense altering conditions and adjust to minimize energy consumption.
- The JENEsys controller provides a web server for monitoring building conditions, including a special “energy dashboard”, which communicates current and historical energy consumption data to the building occupant via a 60” widescreen HDTV mounted in the Commons area for all building occupants to see.
- Insulation added to the attic.

University of Arkansas Clinton School of Public Service

Historical Energy Performance Data



Successes Post Retrofit

SAVINGS: 512,800 kWh/year

SAVINGS: 1,412 kWh/day

SAVINGS: \$92.70/day

Over \$33,000 in savings in 1 year!