Henry Administration Building #46

Building Gross Sq.Ft.: 160,497

Simple Payback: 5.7 YRS

Retrocommissioned: Jul—Oct 2011

Annual Energy Avoidance: 17%

Principal Building Use: Offices & Classrooms

Facility Contact: Andrew Sestak

Building & Occupant Overview

The David Dodds Henry Administration Building is home to the Urbana-Champaign campus vice-presidents and president of the University of Illinois, Dr. Michael Hogan. 10 classrooms on the first floor allow for 415 students. The building was originally built in 1913 and since then multiple, large remodels and HVAC upgrades have taken place. There are seventeen (17) air handling units scattered throughout the facility. Campus chilled water loop provide the building's cooling needs. The heat in the building is provided by a combination steam and hydronic system. Building controls are a mixture of Siemens MECs & TAC Microzones and MNLs.

The facility's total metered energy during the previous year was 34,609 MMBTU.

Post RCx Energy Use Intensity (EUI) & Cost Index (ECI)

E.U.I.	E.C.I. #1	E.C.I. #2*
179.8 kBTU / Sq.Ft.	$3.21 / Sq.Ft.	$775.53 / person

** MAXIMUM OF 665 PEOPLE OCCUPY BUILDING AT ONE TIME.*

Retrocommissioning Specifics & Results

Most of the air handling units (AHUs) providing air conditioning were maintaining space conditions 24/7/365. The primary energy conservation method was scheduling the AHUs serving the office areas to shut down for 12 hours a day and weekends. Web graphics were provided to the facility manager for HVAC system analysis from his desktop. Associated exhaust fans in the building were shut down during unoccupied hours.

To improve comfort conditions, various VAV controllers were found non-operational and were replaced, allowing the reduction of air to spaces and saving fan energy without compromising space comfort.

Automatic steam valves were found in the perimeter and reheat systems not connected to the control system. These were connected up to the DDC system to allow the steam to be controlled and / or shut off when conditions did not merit it.

Project Highlights

- AHUs were found operating 24/7. These were aggressively scheduled to maintain conditions only when occupied
- MACS, an early generation control platform, was upgraded to DDC controls on fifteen (15) AHUs for improved sequences of operation and comfort control
- Replaced failed pneumatic VAV controllers and reduced minimum air quantities where permitted

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