

Energy Conservation Initiative (ECI) Project Summary

Olin Chemistry Research Wing , Facility 2083

What We Did: We replaced all space controls which were at end of life and not performing correctly with new controls and re-commissioned to new occupancy based airflows. We replaced 88 variable air volume boxes in areas where old boxes no longer worked. We replaced all reheat control valves to electric valves. We installed airflow stations on main exhaust system along with new controls to monitor exhaust airflow. Control logic was added to sum up ventilation air on supply boxes.

What It Cost: \$1,240,000

How Long It Took: 15 months. Completed January 2015.

What We Saved: \$246,000 and 440 tons/per year carbon equivalent annually.

Benefits: Updating controls and replacing variable air vol-

ume boxes and rebalancing to new air flows throughout the building addressed significant deferred maintenance. The new controls enable the building to operate in a safer, more comfortable, and efficient manner.

The HVAC controls upgrade for the Olin Chemistry Research Wing was a complete success on multiple levels. Your team was able to correct building deficiencies with minimal disruption to the building occupants and associated research activities. The building is now safer, significantly more energy efficient and has the added benefit of a user friendly control interface.

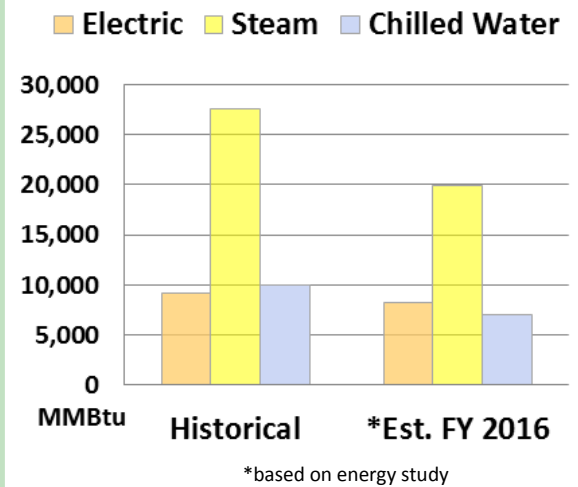
David R. Neish
Facilities Manager Chemistry and Chemical Biology

Olin Chemistry Research Wing



[Map](#)
[Utilities Costs and Use](#)

Olin Chemistry Research Wing
Total Energy Use - Pre & Post ECI



Olin Chemistry Research Wing : ECI Savings Table

Utility	Historical Energy Use (MMBtu)	*Est. FY 2016 Energy Use (MMBtu)	Energy Savings (MMBtu)	% REDUCTION	Historical (billed rates)	*Est. FY 2016 Cost (billed)	Annual Savings \$	Equivalent # Homes
Electric	9,200	8,200	1,000	11%	\$189,000	\$169,000	\$20,000	25
Steam	27,600	20,000	7,600	28%	\$624,000	\$452,000	\$173,000	80
Chilled Water	10,000	7,100	2,900	29%	\$183,000	\$130,000	\$53,000	58
Totals	46,800	35,300	11,500	25%	\$996,000	\$751,000	\$246,000	163



Energy use based on project scope

Equivalent # Homes Savings based on average home use: 40 MMBtu Electric • 90 MMBtu Heat • 50 MMBtu Cooling

