

Energy Conservation Initiative (ECI) Project Summary

Riley Robb Heat Recovery Project, Facility 1062

What We Did: We installed a new glycol loop and coils to transfer heat between the exhaust air and the outside air in a nominal 20,000 cfm 100% outside air laboratory ventilation system in the north wing. New controls were added to operate the system components and track energy recovery. All space controls were re-commissioned to minimize air usage with associated reductions in electricity, heating and cooling.

What It Cost: \$160,000

How Long It Took: 6 months. Completed October 2013.

What We Saved: \$35,000 and 61 tons/per year carbon equivalent annually.

Benefits: Heat leaving the building will be used to preheat incoming air in winter, and cool air leaving in summer will pre-cool outside air at

peak conditions. Approximately 40% of all heat previously lost will be recovered reducing both peak and annual heating needs. Peak cooling reduction will help slow the need for future cooling capacity.

The project is very exciting because it is the first heat recovery ever retrofit to a building at Cornell. Our ECI team did a great job, and we have great hopes to retrofit further lab buildings based on the success at Riley Robb.

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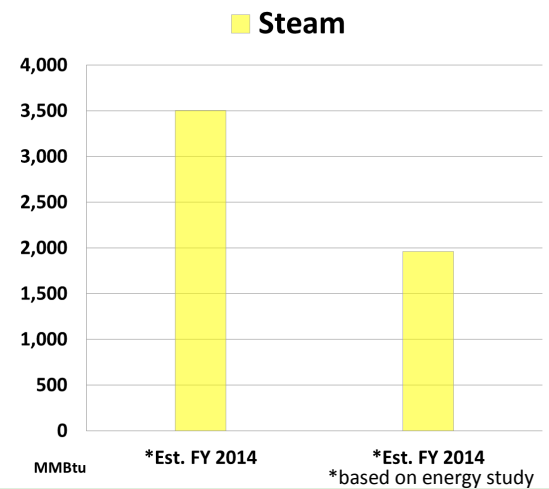
Riley Robb



[Map](#)

[Utilities Costs and Use](#)

Riley Robb:
Total Energy Use - Pre & Post ECI



Riley Robb: ECI Savings Table

Utility	Historical Energy Use (MMBtu)	*Est. FY 2014 Energy Use (MMBtu)	Energy Savings (MMBtu)	% REDUCTION	Historical Cost (billed rates)	*Est. FY 2014 Cost (billed)	Annual Savings \$	Equivalent # Homes
Electric								
Steam	3,500	2,000	1,500	43%	\$79,200	\$44,300	\$35,000	20
Chilled Water								
Totals	3,500	2,000	1,500	43%	\$79,200	\$44,300	\$35,000	20



Energy use based on project scope

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

