

Energy Conservation Initiative (ECI) Project Summary

Langmuir Lab Chiller Replacement, Facility 4204

What We Did: We replaced the “heart” of the air conditioning system in the building; an air cooled chiller. The new chiller was selected and installed in the same location as the original chiller to minimize project costs. The new chiller includes capacity controls and integration with the existing closed loop chilled water system in the building.

What It Cost: \$256,000

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

What We Saved: \$6,000 and 23 tons per year carbon equivalent annually.

Benefits: The old chiller was nearing the end of its service life and was not efficient. The new chiller is fully automated for seasonal and daily on/off, is quieter, eliminates a deferred maintenance issue, and will use less electricity to provide building cooling.

We were really happy to have the ECI team help us plan and execute the chiller replacement project. Customer reliability is key at this innovation hub, and we were able to tackle both deferred maintenance and significant energy reduction at the same time.

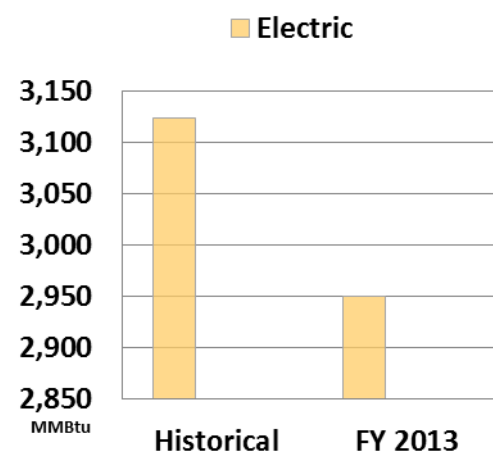
Tom LiVigne
Director, Real Estate

Langmuir Lab Chiller Replacement



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

Langmuir Lab Chiller Replacement:
Total Energy Use - Pre & Post ECI



Langmuir Lab Chiller Replacement: ECI Savings Table

Utility	Historical Energy Use (MMBtu)	FY 2013 Energy Use (MMBtu)	Energy Savings (MMBtu)	% REDUCTION	Historical Cost (billed rates)	FY 2013 Cost (billed)	Annual Savings \$	Equivalent #Homes
Electric	3,100	3,000	100	3%	\$110,000	\$104,000	\$6,000	2.5
Steam								
Chilled Water								
Totals	3,100	3,000	100	3%	\$110,000	\$104,000	\$6,000	2.5



Energy use based on project scope

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



Cornell University

Energy and Sustainability

1/2015

