

Energy Conservation Initiative (ECI) Project Summary

Plant Science Steam Traps & Radiator Control Valves, Facility 1022

What We Did: 127 steam radiator hand valves were replaced with Danfoss Control Valves. The valves allow the room occupant to set an automatically controlled room temperature. 201 steam traps were replaced because they had failed.

What It Cost: \$114,000

How Long It Took: 5 months. Completed November 2011.

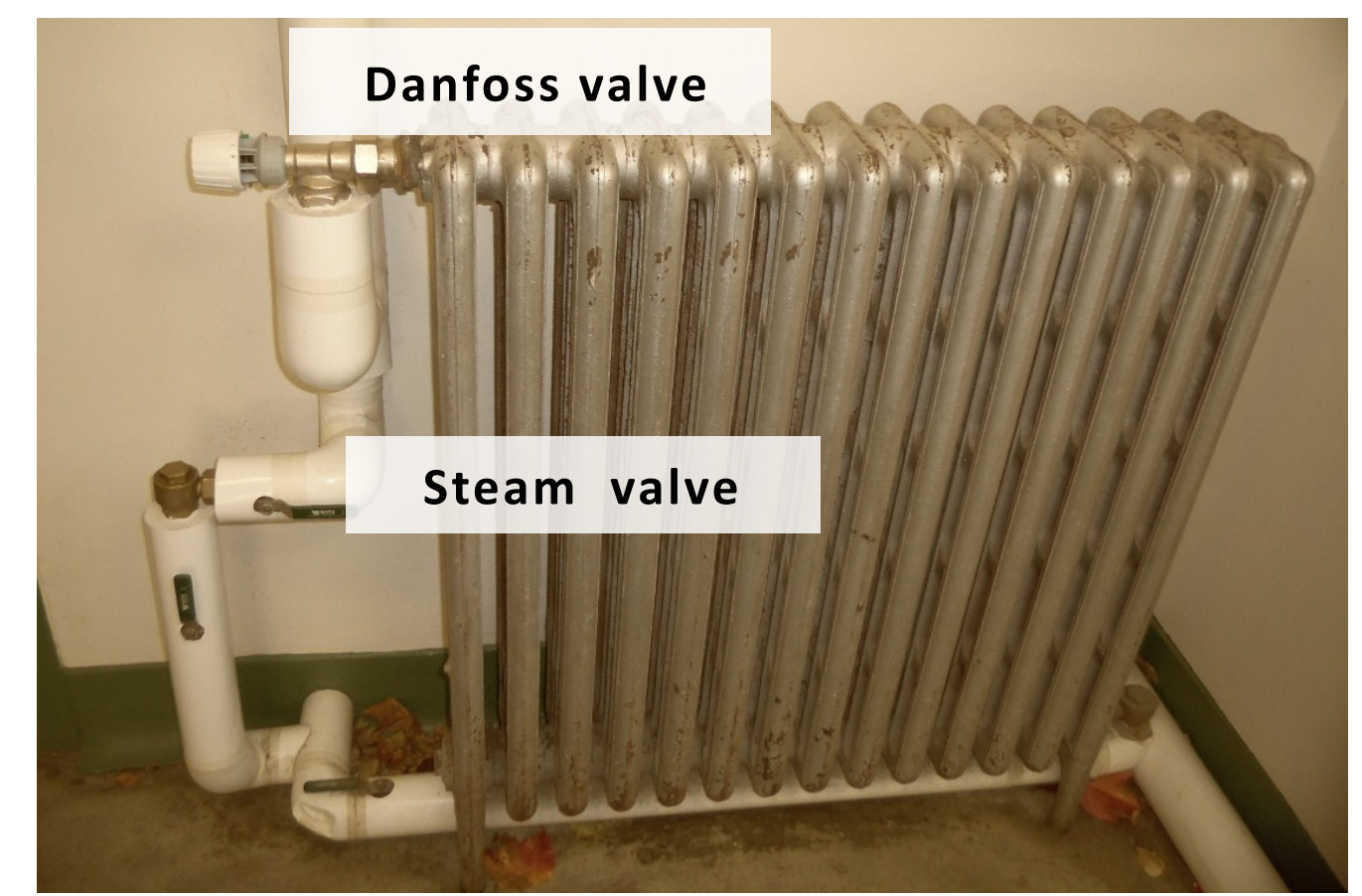
What We Saved: \$100,000 annually

Benefits: Occupants had no ability to control heat from their steam radiators. They could not even shut them off! They literally had to open their windows in winter. In addition, steam traps had failed blowing live steam through condensate.

People have been so much more comfortable and very happy with the increased control. There were a lot less heating complaints last winter.

Brian Flannigan,
Building Coordinator; CSS
Facilities and Resources

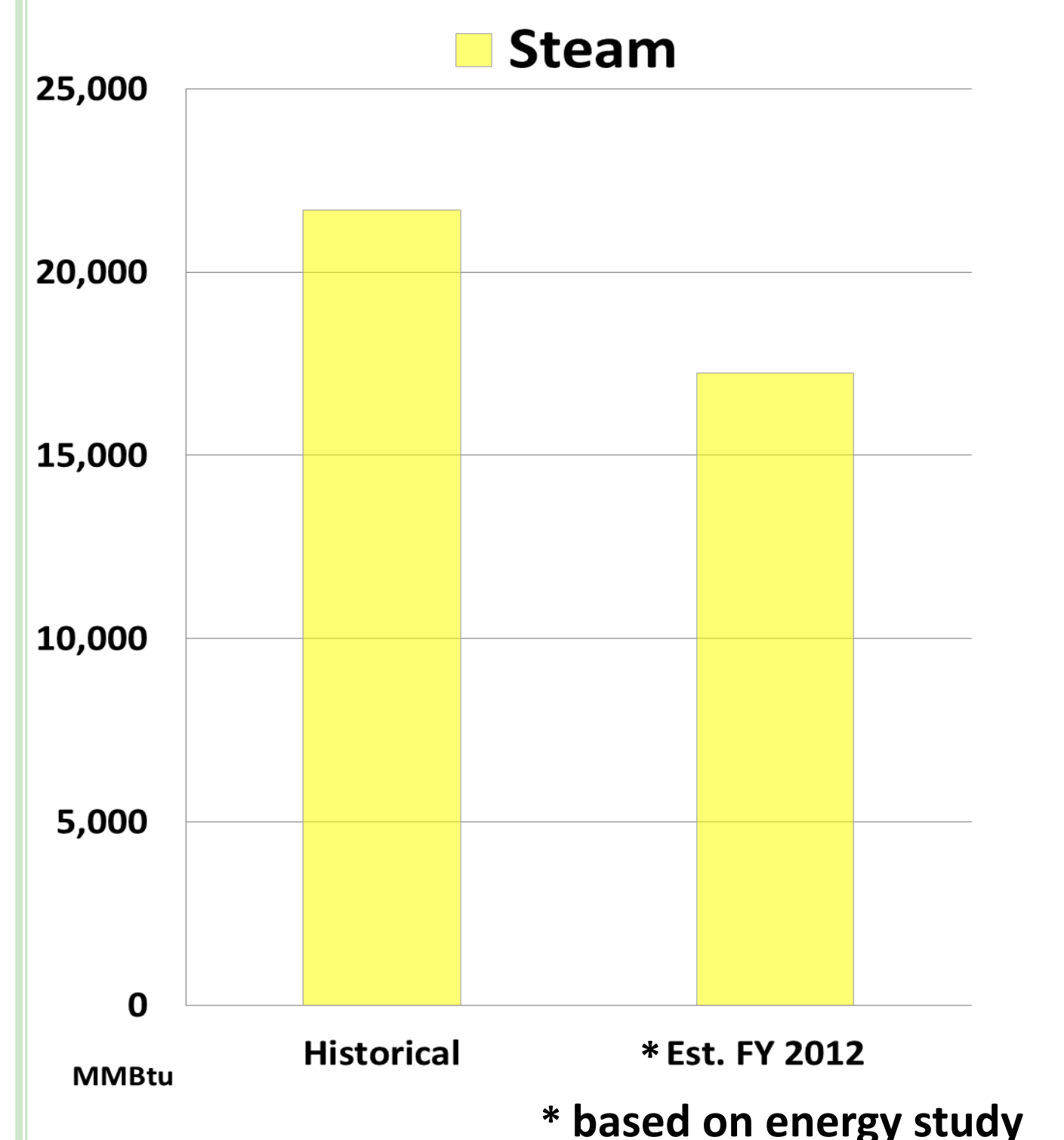
Danfoss valve and steam trap



[Map](#)

[Plant Science Utilities Costs and Use](#)

Plant Science Steam Traps & Radiator Control Valves Total Energy Use Pre & Post ECI



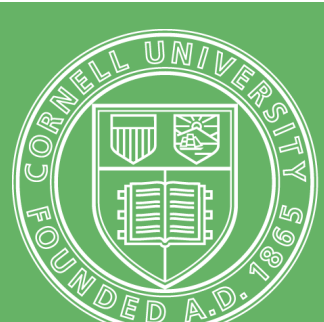
Plant Science Steam Traps & Radiator Control Valves: ECI Savings Table

Utility	Historical Energy Use (MMBtu)	Est. FY 2012 Energy Use (MMBtu)	Energy Savings (MMBtu)	% REDUCTION	Historical Cost (billed rates)	*Est. FY 2012 Cost (billed)	Annual Savings \$	Equivalent # Homes
Electric								N/A
Steam	21,686	17,241	4,445	20%	\$490,000	\$390,000	\$100,000	49
Chilled Water								N/A
Totals	21,686	17,241	4,445	20%	\$490,000	\$390,000	\$100,000	49

Energy use based on project scope



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



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