

Springfield Hospital - Energy Action Plan (2018)



To reduce operational cost, improve building comfort & performance, improve the patient care experience, and reduce our environmental impact by raising the ENERGY STAR rating from 77 to 90 or better.


Current: Annual energy costs (baseline): \$ 500,560 Annual energy use per square-foot: 196 kBtu
Goals: Raise ENERGY STAR score to: 90+ Reduce energy use per sq-ft by at least 5%: 9.8 kBtu



Accomplishments: +Achieved ENERGY STAR rating of 77 (2015)
 +Completed Energy Kaizen (July 2015)
 +Captured 1,554,400 kWh/yr in renewable energy credits (2017)
 +Completed AHU study (2017); ID'd 11% electric reduction + 16% #4 oil reduction from 2017 levels; implementation 2018

Comments: 1. Springfield Hospital has added equipment & employees yet energy use per square-foot has declined via efficiency projects
 2. Energy use is not adjusted for heating or cooling degree days or level of patient services
 3. Annual energy use per square-foot correction: the 2014 EAP mistakenly used 115,000 sf instead of the actual 105,000 sf for the hospital; therefore the correct energy use per square foot on the 2014 EAP should be 211,522 BTU/sf/yr; 2017 energy use per square-foot is 196,381 which is a 7.2% reduction from 2014

Team: Mark Blanchard (SH), Scott Whittemore (SH), Chuck Clerici (EVT)

Signed: 
 Mark Blanchard, Director of Engineering

Signed: 
 Chuck Clerici, Senior Account Manager

Action Plan			Completed Efforts					
		kWh	Gal #4	Project Description	Date Completed	kWh	Gal #4 saved	Incentive Pd
Energy Efficiency & Generation Projects			300,000	14,000	Springfield Hospital - HVAC 2017	active		\$ 16,611
1. AHU Optimization	Jul-15	Energy kaizen ID'd savings opportunity		Springfield Hospital - Rx Lighting 12	9/17/2015	220		\$ 50
	Jun-17	Engineering study completed to quantify opportunity		Springfield Hospital - Rx Lighting 11	2/2/2015	20,439		\$ 3,265
	Mar-18	Contractor to provide proposal		Springfield Hospital - Relight	1/15/2015	85,994		\$ 24,160
	Apr-18	Efficiency Vermont energy analysis & incentive agreement offer		Springfield Hospital - Rx Lighting 10	6/18/2014	6,996		\$ 1,500
	Oct-18	Implementation of AHU modifications complete		Springfield Hospital - Rx Lighting 9	2/12/2014	1,339		\$ 820
2. Complete conversion to LED Lighting			25,000	Springfield Hospital - Rx HVAC 2	1/22/2014	2,095		\$ 1,080
	Jun-18	Lighting assessment by contractor complete		Springfield Hospital - Dishwasher	1/14/2014	5,805	1,214	\$ 5,000
	Sep-18	Efficiency Vermont energy analysis & incentive agreement offer		Springfield Hospital - Rx Lighting 8	10/21/2013	3,724		\$ 900
	Nov-18	SMCS hospital decision		Totals:		126,612	1,214	\$ 53,386
	Apr-18	Implementation of complete LED conversion completed						
3. Ventilation Optimization			70,000					
	Jul-15	Energy kaizen identified opportunity						
	Dec-18	Engineering study of ventilation system complete						
	Feb-19	Efficiency Vermont energy analysis & incentive agreement offer						
	Dec-19	Complete Implementation of Ventilation Measures						
4. Engage Staff			20,000					
	Apr-16	Reviewed plug load usage & cost						
	Jun-17	Smart plug strip incentive offered ; awaiting hospital response						
5. Install 500 kW Solar Array								
	Jan-18	Complete permitting process						
	Aug-18	Solar PV array install complete						
6. Separate Steam for Sterilization from Boiler System			TBD					
	Dec-19	Review baseline load						
	Apr-20	Develop plan options to separate sterilization load						
	May-20	Efficiency Vermont energy analysis & incentive agreement offer						
Totals:			415,000	26,408				

