



# Northwestern Medical Center - Energy Action Plan (2014-15)



**Purpose:** To reduce operational cost savings, improve building comfort & performance, improve patient experience, be an effective steward of resources, and reduce our environmental impact.

**Current:** Annual energy costs (baseline): **\$ 720,000**

Annual energy use per square-foot: **327** kBtu

**Goals:** Reduce energy costs by 5%: **\$ 36,000**

Reduce energy use per sq-ft by 5%: **16** kBtu

**Team:** Sonny Sanborn, Tyson Moulton, Jonathan Billings, Tim Perrin (EVT), Steve Booth (EVT/VGS), Chris Wheeler (CRW Engr.)

Signed:   
Tyson Moulton, Director of Facilities

Signed:   
Timothy Perrin, Account Manager

Action Plan			Completed Efforts (2012-13)						
	Lead	Est. Savings	Project Description	Date	Proj. Costs	Incentives	Annual Savings	kWh Reduce	ccf Reduce
1. Upgrade and re-commissioning of building controls systems			Efficient air condition/economizers	Feb12	\$ 2,410	\$ 1,310	\$ 451	3,426	
√ May14 Study by Cx Associates to optimize pressurizations & airflows in MedSurg	S.Sanborn		Energy audit - Liebert Engineering	Jul12	\$ 25,300	\$ 18,975			
√ Jun14 Regain functionality of water-side economizer for free cooling	J.Dalmer	\$ 4,000	Roof replacement - white membrane	Oct12	\$ 7,000	\$ 1,000	\$ 782	8,248	
Jul14 Retro-commissioning of chilled water systems	T.Moulton	\$ 7,000	HVAC Controls - ERM's 102,103,104	Jun13	\$ 13,447	\$ 4,500	\$ 46,951	293,000	
Jul14 Upgrade of building management system controls for 1/3 hospital spaces	S.Sanborn								
Aug14 Re-commissioning of new controls for served spaces	S.Sanborn	\$ 6,000							
2. Pursue lighting controls across all appropriate hospital areas	S.Sanborn	\$ 15,000							
Jun14 Conduct lighting audit of targeted spaces									
Sep14 Pursue lighting & controls upgrades in areas with acceptable ROI									
Oct14 Explore upgrade of exterior lighting to LEDs									
3. Variable speed drive controls on air-handling & cooling fans									
√ May14 Incorporate variable speed fan functionality in new Ventrol AHU	T.Robbins	\$ 3,000							
Aug14 Retrofit condenser fans with variable speed drives	T.Moulton	\$ 2,000							
4. Convert remaining electric kitchen equipment to natural gas-fired units	T.Moulton	\$ 3,000							
Aug14 Upgrade (2) electric convection steamers & (1) electric steam kettle									
5. Consolidate and optimize rooftop exhaust fans	T.Moulton	\$ 30,000							
Sep14 Add make-up air unit for kitchen exhaust system									
Nov14 RFP to solicit engineer firms for a detailed study; EVT/VGS to cost-share									
Ongoing Pursue consolidation opportunities that align with roofing work									
6. Engage IT staff for opportunities within data center & distributed devices	D.Boucher	\$ 5,000							
Aug14 Discuss feasibility of PC power management across hospital devices									
Oct14 Install air-to-air heat exchanger in server room for economizer cooling									
7. Staff engagement and outreach re: energy efficiency efforts	J.Billings								
	<b>Totals:</b>	<b>\$ 75,000</b>							

  

Totals:				
\$ 48,157	\$ 25,785	\$ 48,184	304,674	-

  

**Total Energy Use per Square-Foot**