



Saint Luke's Health System

Green Initiative

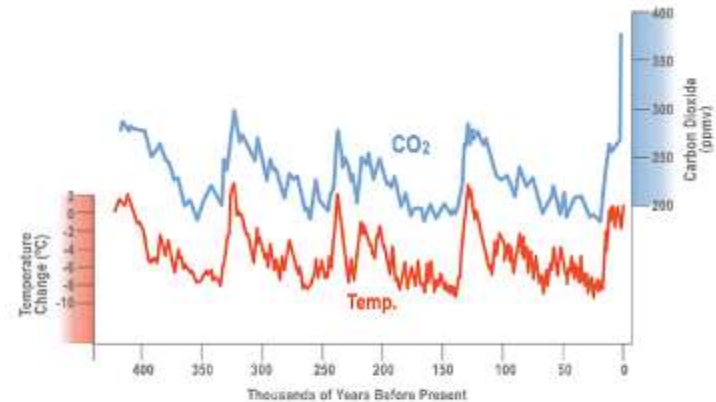
Renée R. Jacobs, CHFM, CHC
Vice President, Facilities and Construction
Saint Luke's Health System



What is driving your interest?

Common Drivers

1. Global Warming
2. Loss of Ecosystems
3. Availability of Resources
4. Marketplace Demands
5. Pure Economics



GLOBAL TEMPERATURE AND CO₂ OVER THE PAST 450 THOUSAND YEARS

Source: UN Intergovernmental Panel on Climate Change (IPCC),
Third Assessment Report, Climate Change 2001
Graphic: Woods Hole Research Center



Green Team Elevator Speech

- March 12, 2009
- To demonstrate Saint Luke's Health System's concern for the environment, the Environmental Stewardship Council was created to promote, educate, coordinate, and model methods to reduce, reuse, and recycle resources throughout our communities.



SLHS Green Initiative

➤ Core Value: Stewardship

➤ Strategic Action Plan 2.11

- Reduce carbon footprint of SLHS by 15% within the next 10 years (Target Date: August 27, 2018)
- Led to formation of Environmental Stewardship Council w/ goal of tracking green house gas emission through partnership of Greater Kansas City Chamber of Commerce Climate Protection Partnership
- Provide corporate oversight to assist in reaching goal



SLHS Green Initiative

The Greater Kansas City Climate Protection Partnership

- Provides companies with the tools to assess their current carbon footprint
- Coordinated by the Greater KC Chamber of Commerce

Green Teams

- Each individual entity has a Green Team that operate independently of one another
 - Green teams were formed by employees who through their own personal convictions
 - In the past, most Green Teams have exclusively focused on recycling rather than source reduction

Barriers and Challenges

- Most Green Teams focus primarily on recycling (though not all)
- No formal guidance on source reduction (Ex. energy reduction, purchase of post-consumer products, water usage reduction, etc.)
- Many Green Teams are unable to gain the backing of upper management in order to push their initiatives forward
 - Some teams must do work manually (i.e. physically haul the recycling to a recycling center)

Restructured Environmental Stewardship Counsel

- Renée Jacobs assumed responsibility March 2011
- The Environmental Stewardship Council combined with all entities Green Teams
 - Consulting help (W.L. Cassell)
 - Provide a means to communicate between teams:
 - Green Team Organization Chart/Roster
 - SharePoint
 - Monthly Meetings

New Goals of Counsel

- Energy Reduction
- Material Selections and Waste Reduction
- Construction (LEED)
- Information Technology
- HR & Education
- Benchmarking

Energy Reduction

- 2008 Strategic Action Plan 2.11:
 - Reduce carbon footprint of SLHS by 15% in the next 10 years (PRESENTED AUGUST 27, 2008)
- Monitor electricity and natural gas usage across all entities
- Metrics:
 - Electricity savings: kWh
 - Natural gas savings: MCF, MBTU,
 - List of projects dedicated to energy efficiency
 - CO₂ emissions

Energy Reduction Continued

- Energy Monitoring:
 - Contact energy provider – Obtain data such as daily usage and peak times.
 - Push for the use of services by companies such as American Energy
- Energy Efficient Products:
 - Employ the use of Energy Star rated products when applicable
 - Items such as occupancy sensors and programmable thermostats can further savings
- Energy Conservation Practices
 - Turn off lights when not in office
 - Set back thermostat when rooms are not occupied
 - Turn off computers at the end of the day; change settings to allow monitors to sleep when computer is not in use

Energy Reduction Continued

- Electrical Consumption Reduction
 - Decrease the energy intensity (kWh/sq. ft, MBtu/sq. ft) through energy conservation practices
 - Third party consulting firm to monitor energy – American Energy
 - Projects:
 - Completed Employee Parking Garage Lighting Retrofit
 - 30% energy savings per fixture (221,000 kWh/yr estimated)
 - \$22,000 in estimated maintenance savings
 - \$24,000 KCP&L rebate reduced estimated payback to 2.7 years
 - Occupancy Sensor Study
 - Chilled Water Retrocommissioning

Chilled Water Retrocommissioning

Action Item	Project Description	Capital Budget	Capital Avoidance *	Utility Savings	Total Savings	Simple Payback	ROI
AHU RCx Repairs/Up grades	96 AHU's	\$1.634m		\$550k	\$550k	2.97 yrs	34%
Finish DDC Controls upgrades		\$750k					
Replace AHU Valves	96 AHU's	\$916k	\$750k	\$50k	\$800k	1.15 yrs	87%
Totals		\$3,300,000	\$750k	\$600k	\$1.35m	2.44 yrs	41%

Materials and Waste Reduction

- No current system-wide initiative
- Track recycling tonnages and reductions in waste
- Encourage the purchase of post-consumer products
- Measurement Metrics:
 - Amount recycled (tons, % of waste stream)
 - Reduction of waste stream (tons, %)
 - Amount of recycled product purchased

Materials and Waste Reduction

- Transition from virgin to 100% recycled paper when paper is absolutely necessary
- Purchase other recycled products when possible
- Implement and monitor recycling programs where applicable:
 - Paper/Cardboard
 - Plastic Bottles/Aluminum Cans
 - Blue Wrap
 - Comingled
- Discourage use of one time use containers, utensils, dishes

Construction

- Green Team/ESC Members will report green materials and construction practices used
- Projects:
 - School of Nursing – LEED Attempt. Still moving forward with green initiatives though certification wasn't granted.
 - Hospice House - Second LEED Certification attempt.

Information Technology

- Ties in w/ Energy Reduction
- Future Goals
 - Continue/expand the tracking of PUE at major data centers
 - Identify and implement energy savings projects relative to IT (Ex. Desktop Efficiency Ratio)
 - Provide a means for Green Teams to collaborate (SharePoint)
 - Create a dashboard on website to communicate accomplishments/projects to the public and employees

HR and Education

- Future Goals:
 - Work with HR to develop training materials to be used in annual compliance testing.
 - Work with IT in establishing dashboard on SLHS website
 - Educate hospital staff of green practices through Lunch-N-Learn presentations, E-Rounds, etc.

Benchmarking

- Have greenhouse gas calculators up to date with data from 2008 to current
- Use the Energy Star Portfolio Manager to obtain an Energy Star rating for each hospital
- Get each entity to buy in to using energy monitoring services such as American Energy

Summary

- Environmental Stewardship Counsel now combined with entities Green Teams
- Clearly Defined Goals
 - Energy Reduction
 - Material Selections and Waste Reduction
 - Construction (LEED)
 - Information Technology
 - HR & Education
 - Benchmarking
- Metrics are imperative to measure progress