

Sustainable Hospitals Roundtable

Friday, April 4th, 2010, 9:00 AM to 1:00 PM, Providence Portland Medical Center

Presented by: Metro, With Support from: City of Portland, Clackamas County, Washington County and Oregon Physicians for Social Responsibility

Roundtable Purpose: Create space for healthcare professionals to come together to **share results and experiences, build collaboration** and learn about **new issues and resources** pertaining to **sustainability**. Roundtables are held quarterly in collaboration with partnering hospitals.

Key shared Resources

Recycling

- Garten Services Inc. – they will pick-up sort and pay for recyclables and they service Eugene to Portland. Contact: Steven Elmore, selmore@garten.org, 503-581-4472
- Video on recycling: *Saving Little Pieces of Our Earth* available for viewing at Clackamas County Website: <http://www.clackamas.us/transportation/recycling/video.htm>. If you would like a copy to use in trainings or presentations please contact Rosalynn Green at RGreene@co.clackamas.or.us.

Energy Efficiency Management & Planning

- Association of Energy Engineers www.aeecenter.org
 - Local chapter of AEE is active and valuable resource for networking and training. Christian Miner from OHSU is incoming Chair. They meet monthly – next meeting April 12th. Contact Chris for more information Miner@ohsu.edu. Local Chapter Website: <http://www.aeecrc.org/>.
 - Certified Energy Manager Training – AEE local chapter hosted a training recently. Visit AEE website for information on the training: <http://www.aeecenter.org/i4a/pages/index.cfm?pageid=3330>
- Northwest Energy Efficiency Alliance, Better Bricks Program.
 - Jennifer Stout JStout@nwalliance.org.
 - Website: <http://www.betterbricks.com>
 - Resource: Guide to Design and Construction of High Performance Hospitals on their website: http://www.betterbricks.com/graphics/assets/documents/DC_Healthcare_Broch0208_final.pdf
 - NEEA offers a variety of education and training opportunities for which you do not need to be a client. See their calendar at www.betterbricks.com

Energy Generation

- Energy Star Program for buildings: http://www.energystar.gov/index.cfm?c=business.bus_index. For information on the Energy Star Leaders Program visit: http://www.energystar.gov/index.cfm?c=leaders.bus_leaders
- Practice Green Health has an energy calculator that provides information on impact in terms of health impact. This tool as well as additional energy efficiency and energy planning information can be found on their website: www.practicegreenhealth.org

Presentation Notes

1. **Material Recovery Facilities and Hospital Recycling Contamination**, Jeff Murray, Vice President, Far West Fibers
 - Presentation focused on what we can and cannot recycle in the commingled recycling stream.
 - Plastics
 - As applies to hospitals – NO MEDICAL PLASTICS.
 - Why – materials market not receptive to due to concern over contamination. Market that FarWest sells to will reject an entire load based on seeing a single unit of medical plastic.
 - These items are recyclable, just not in the commingled stream. Need to develop program to sort in house or contract with service that will sort and handle recycling – see below.

- Film Plastics – also not accepted in co-mingle. They present a very high labor cost for cleaning/clearing the recycling equipment. They estimate 25-30% of their sort labor is spent on clearing film plastics - \$60,000/ month labor cost.
 - Where plastics go--most are shipped to China however there are local processors such as Denton Plastics who are trying to further develop their technological capabilities
 - Paper
 - “wet-strength” paper cannot be recycled--coffee cups and freezer boxes were highlighted as common contaminants
 - Discussed whether or not shredded paper gets recycled, Chris described why it is better handled by shredding companies
 - Other items that cannot be sent through paper stream include: freezer boxes and coffee cups – they have liner and will not take on water to be broken down for pulp; brown fiber bags because they create a darker end product than can be used by their end market – newsprint.
 - It was noted that other regional markets accept some of these excluded items and that is because they are selling recovered materials to different, not local/regional markets such as China where the material is used in other products – i.e. cereal boxes. The volatility of the export market makes for periodic changes in what is being accepted where.

- **Discussion**

- Alternatives to MRF for medical plastics
 - Garten Services – Salem – Steve – Hand sorting of medical plastics.
 - Sorted materials are sold to same markets, however can be guaranteed to be clean and free of biohazard.
 - They have partnerships with 4 of the major medical supply vendors (Medline, Owens and Minor, 2 others). The suppliers bring back materials to their facility in Salem.
 - Their company is focused on providing job opportunities to people with disabilities
 - They will be processing 185 tons per month with these new contracts with hospitals and medical supply vendors.
 - In house model – Providence Health System.
 - Processes 7 tons per month at their warehouse. They sort, bale and sell to commodity market. See presentation made by Providence at November 2009 Roundtable meeting – in archives at www.oregonpsr.org or contact Mike Geller for more information michael.geller@providence.org .
- Education and outreach needed to support staff and community members that want to do the right thing by recycling.
 - Emerging issues is household medical waste coming through co-mingled stream – i.e. Sharps and blue wrap. Discussed the possibility of health facilities providing patient information on handling of medical waste at home.

2. Fast Track to Strategic Energy Management, Jennifer Stout, Healthcare Market Manager, Northwest Energy Efficiency Alliance's Better Bricks Program

- Presentation focused on Healthcare opportunities and the fast track to strategic energy management.
- Background: NEEA has been working for five years with large hospitals – impacted about 30% of the beds in the region. They take an organizational, comprehensive approach to energy management.
 - Examples of systems/facilities they are working with:
 - Legacy – 1.3 million dollars in savings so far
 - Peace Health – 800K in savings
 - Many healthcare networks are now hiring Strategic Energy Managers.
- Keys to Success:
 - Must make the business case and show support to mission of organization, on-going, not one time investment/deal.
 - Top management must be a champion of the effort.
 - Need cross functional support.

- Must have a formal energy manager who is accountable to Execs.
- Must have measurable savings and documentation trails.
- Must cut across business functional areas.
- Use the Fast Track to gain management support – without this support things will stall out.
 - Fast Track will focus on low/no cost upgrades – Education and Training – and making the business case for energy management.
- BB has a new initiative working with state hospitals and universities to benchmark and track 10% reduction in cost using the Energy Campaign. They are working with AHSEE on this project.
- Resource: *Guide to Design and Construction of High Performance Hospitals* on their website: http://www.betterbricks.com/graphics/assets/documents/DC_Healthcare_Broch0208_final.pdf
- NEEA offers a variety of education and training opportunities for which you do not need to be a client. See their calendar at www.betterbricks.com

3. Implementing the Better Bricks Strategic Energy Management Plan, Pat Lydon, Strategic Resource Coordinator, Legacy Health System

- Presentation focused on the energy management and conservation work being done by Legacy Health System and how the Better Bricks program has supported those efforts.
- About Legacy:
 - Mission & Values – Good health for people, patients, communities, and the world.
 - Not-for-profit, 5 hospitals, 1 children’s hospital
 - 37 million square feet of hospital space.
 - Each campus has facility manager responsible for safety, implementation of all energy related projects.
 - Children's Hospital/Emanuel is currently undergoing an expansion project
 - As they grow, their energy expenses increase as well. Their overall goal is to stabilize costs while minimizing risk
- Program implementation tips and recommendations
 - Policy Improvements are needed to support these programs
 - Top down v. bottom up – could argue for both.
 - Need top down buy off in order for project to receive resources and stay afloat.
- Development of the program:
 - In the beginning -Energy efficiency was part of the culture at Legacy, however there was no system wide approach.
 - There were site specific projects, but facilities managers did not have the bandwidth to continue, make priority.
 - Energy was beginning to be viewed as expensive and not getting cheaper.
 - Lots of volatility in the energy market, price spikes in 2000-2001 – Natural gas volatility.
 - Energy viewed as commodity management (purchasing) – energy as how-to-buy, utility v. open market.
 - Limited labor resources – opportunities presented on demand side.
 - NEEA – Better Bricks
 - Feb 2006 initial intro with Legacy – discuss ideas – energy efficiency.
 - NEEA targeting commercial sector – with hospitals as specific target.
 - NEEA responsible for keeping the discussion alive.
 - Strategic Energy Management Plan (SEMP) framework – kick start to energy management plan.
 - NEEA highlights hidden benefits of energy management – Public Relations – Marketing – Creation of Case studies – Industry Journals.
- Progress of Program:
 - Adopted NEEA’s SEM – however included water renamed Strategic Resource Management Plan. – Electric – Natural Gas – Water.
 - An aside on water as a resource are that deserves more attention:
 - Water included because you pay to use, pay to rid, pay to heat – related to energy.

- Water became very difficult to manage – Many municipalities as utilities with different technological capacity.
 - Lots of room for improvement from municipality side.
 - Legacy working with municipalities to get more data to support better conservation planning.
- In 2009 Legacy hired Strategic Resource Coordinator – Pat Lydon – position will be retained as long as can show benefit to bottom line.
 - Reports to Director of Supply Chain Management, then up to VP of Finance.
 - Focus on resource conservation.
- SRMP team consists of SRC – Facilities Managers – Design and Construction.
 - Meet regularly and prioritize projects – review of capital plans.
- Site Assessments conducted at each Hospital by Energy Trust of Oregon and NEEA.
 - Prioritize and sequence list of projects.
 - Site specific Energy Plans.
 - Energy Trust reporting. – project registration – incentive programs.
 - Increase access to water related data from municipalities.
 - Leverage resources – DOE hospital energy alliance – Association of Energy Engineers.
- Next Steps:
 - Implement measurement that is consistent and allows for comparisons using portfolio manager--lesson learned: have these systems in place early
 - Advocate for formal policies to solidify high level of commitment.
 - Create consistent measurement and reporting - \$ per/sq foot – per patient, etc.
 - Communicate financial benefits.
 - Seek out award and recognition programs.
 - Integrate SRMP with employee training tools, ideally online and apart of orientation.
 - Improve incentive management and tracking process.
 - Create targets for new construction.
 - Audit Energy Plans.
 - Market awareness, how is it changing?
- **Discussion:**
 - Sustainability programs can be called out to potential employees to support recruiting and engaging individuals with personal/professional interests in sustainability – work with HR to highlight sustainability success in recruiting process.
 - There is a need to streamline and coordinate the various incentive programs that are available for resources conservation efforts. The BETSY program is a good example of this type of information coordination. Participants suggested that Oregon Department of Energy could provide/support compilation of this information.

4. Energy Conservation and Generation at Providence, Richard Beam, System Director for Construction & Sustainability Office of Supply Chain Management at Providence Health & Services System Office

- About Providence Health Services - 6th largest system in US with 242 facilities in 5 states stretching from Los Angeles to Anchorage to Montana.
- Most hospitals in the nation use about 330,000 BTU's of energy per sq/ft. Providence at 200,000 BTU per sq/ft.
- Providence program features:
 - Energy Efficiency is the centerpiece of sustainability – use to create a sustainable bundle and sell the package to management.
 - Many other sustainable initiatives do not show as much savings, bottom line benefit. Use energy efficiency initiatives to sell other initiatives bundled together.
 - Must have financial driver = energy efficiency = 50 years of utility bills. The value of the investment in energy conservation programs increases over time as cost of energy goes up.

- Need to focus on full life cycle costs not first costs to make case and reveal true financial positive impact.
 - Utilizing LEED (Leadership in Energy and Environmental Design)
 - LEED is good incentive. LEED provides financial commitment made by the organization, much less likely to let a project slip through the cracks.
 - Get some “financial skin” in the game.
 - Revenue equivalency = a good method for persuasion. (See slides for calculations).
 - Newberg Facility – first LEED Gold facility in nation.
 - Energy usage at Newberg however has not met expectations. They are working to improve Energy Star rating and assessing what went wrong. What they have learned:
 - Some planned features were eliminated in the building process; the program for the facility changed – i.e. equipment, hours of operation changes and type of services provided (acute care). However, they did not refresh their model while under development with these design and program changes.
 - Underestimated the impact of having no re-circulated air (all outside air) in system. More energy to heat and cool this air. Newer systems now available are much more energy efficient for this.
 - To meet OR administrative rules for hospital construction they installed a large boiler to provide humidity when needed. Found that this unit was tuning on unnecessarily creating energy load.
 - On-site solar generation:
 - Have installed panels and are currently operating at Newberg facility:
 - The hospital acts as a host for the equipment owned by another party through a Power Purchasing Agreement (PPA) purchases the resulting power from that party at a lower cost than they would pay on the open market.
 - Hospital also gets the benefit of reducing carbon emissions associated with facility operations because they are using green energy.
 - The company that owns the equipment is eligible for the various tax credits and incentives to reduce their cost.
 - Providence has the option to buy the system at the end of the contract period of 6 years.
 - Planned to be the largest on-site solar generator of its own electricity in state.
 - System provides 1-3% of facility energy needs – weather dependent.
 - Structure to support program:
 - They are an Energy Star Partner, for info visit: http://www.energystar.gov/index.cfm?c=business.bus_index.
 - They have been recognized as an Energy Star Partner of the Year for 3 of the last 5 years. For information on the Energy Star Leaders Program visit: http://www.energystar.gov/index.cfm?c=leaders.bus_leaders
 - They contract with company that tracks their consumption data.
 - Senior administration is very supportive of program and uses program as model of “culture of efficiency”.
- **Discussion**
 - Participants discussed the value of some of the available energy/eco-footprint/climate change calculators available to support planning for energy efficiency and climate change mitigation programs.
 - The Dartmouth-Hitchcock Medical Center tool was discussed and it will be shared as an electronic document with participants.
 - Practice GreenHealth has an energy calculator that provides information on impact in terms of health impact. This tool as well as additional energy efficiency and energy planning information can be found on their website: www.practicegreenhealth.org
 - Participants discussed the value in normalizing energy usage data for intensity – how does energy usage relate to the type of services provided – using service codes.