

ST. JOSEPH'S GENERAL HOSPITAL 2012 CARBON NEUTRAL ACTION REPORT

Executive Summary:

Environmental best practices derive from Stewardship as a key value of St. Joseph's General Hospital and the Catholic Health Care Ethics Framework. St Joseph's (SJGH) by adopting green best practices, contributes to a healthier sustainable future for staff, patients, residents, the community and the global environment.

Our health system is a major consumer of renewable and non-renewable resources (including energy) and is a major producer of solid wastes. We recognize the need to develop the best possible practices and policies for environmental health recycling initiatives; Green Building solutions; green transit/commuting initiatives; reduced waste, and energy efficient practices to reduce GHG emissions and our carbon footprint.

SJGH green initiatives are found in the hospital's strategic plan under the strategic goal of "Sustainable Quality Services" and in Departmental Action Plans.

Overview:

Actions Taken to Reduce Greenhouse Gas Emissions since 2008:

In concert with the VIHA, BC Hydro and PSECA, SJGH has initiated a series of steps that will reduce our carbon footprint and overall environmental impact. SJGH has targeted energy use, transit/commuting, and recycling and awareness in initiatives such as:

1. Energy Management:

- In 2008 SJGH partnered with BC Hydro to conduct a full site audit targeting the opportunities to reduce overall energy consumption while maintaining client and staff comfort levels. The audit identified sufficient upgrade possibilities and strategies for PSECA and BC Hydro to offer incentives and fund a major energy upgrade project. The final project design allowed SJGH to upgrade lighting in all 5 buildings, direct digital control systems for the operation of HVAC and other mechanical systems and upgrade and replacement of the heating plant main boilers and chillers. This project will be completed in 2013 and will see SJGH save 555,939 Kwh (316.75 tonnes of CO₂) of electricity and 2,328 GJ (115 tonnes of CO₂) of natural gas/year.
- The SJGH Domestic Hot Water Heating Upgrade saw the replacement of aged infrastructure to an instantaneous natural gas domestic hot water system that reduced natural gas consumption and improved the utility delivery to all acute and extended care portions of the hospital.
- SJGH has instituted an infra red domestic water tap set replacement program where all staff, patient and public tap sets are replaced with the newest technology. The replacement of older style tap sets throughout the hospital will help us realize our goals of reducing domestic water use thus saving the hospital

needed utility dollars that can be applied to other opportunities to further reduce our energy consumption and GHG emissions.

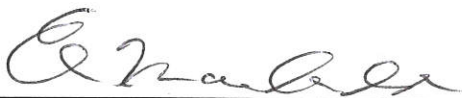
- Server Management Plan. SJGH IM/IT has greatly reduced the total server run time at the hospital through the reduction in number of servers. The upgrade program saw servers for older operating systems consolidated as newer systems were brought online and the cohort of common platforms with the VIHA. This upgrade has reduced not only server run time but the A/C capacity requirements thus reducing our GHG emissions and carbon footprint.
- SJGH in collaboration with the health authority commissioned an energy audit of the regional laundry. The audit identified a number of strategies leading to improved energy use while maintaining capacity and quality of service and product. In addition the regional laundry saw the installation of a new tunnel washer. Tunnel washer technology is the most efficient for large scale laundry facilities. The electrical savings with the new equipment is estimated at 20,000 kwh per year (8%) and the gas savings were 4,200 GJ per year (26%). Phase 2 of the Laundry refit will occur in 2012.

Initiatives for 2012:

- The installation of automatic sanitizing washers for blue ware on the Medical/Surgical and ICU units will help us to further reduce our domestic water use.
- SJGH will begin replacing 2 of 4 aging chiller systems with more efficient units.
- The installation of hands free faucets in all public washrooms will help us further reduce domestic water use.
- SJGH installed a new gas fired steam generation boiler at the regional laundry. The new boiler will save the laundry 4263 GJ of natural gas and translate into 215.5 tonnes CO₂.
- SJGH will develop a GO Green Program which will include:
 - staff and volunteers engagement and communications strategies
 - orientation
 - signage
 - outcomes measures

Carbon Credits:

Despite the aforementioned initiatives, St. Joseph's carbon credit purchase was 1,532 tonnes in 2011 which was up significantly over 2010's purchase of 936 tonnes. The cold winter and expansion of our computer networks to over 450 work stations in 2011 accounts for some of the increase however we are also reviewing our source data input for both years to be able to determine the reason for this difference. It is understood that an underpayment of 8 tonnes in 2010 will be rectified in the 2011 payment.



Eric Macdonald
Vice President, Finance,
Capital & Support Services



Glen Robinson
Maintenance Supervisor



Malcolm Pallos

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Actions Towards Carbon Neutrality							
The actions listed below contribute to a reduction in greenhouse gas emissions from sources for which public sector organizations are responsible under the carbon neutral government regulation of the <i>Greenhouse Gas Reduction Targets Act</i> .							
Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Mobile Fuel Combustion (Fleet and other mobile equipment)							
Behaviour change program							
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	In Development				Plan roll out and implementation	2012	2012
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	Ongoing/In Progress			SJGH continued to monitor bike storage capacity to ensure that it meets the needs	SJGH will continue to monitor bike storage capacity on the site to ensure that it meets the needs	2010	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress			Nothing to report for 2011	SJGH is moving forward on our funded Boiler Upgrade Project that will see the replacement of the third and final aging redundant supply hot water boiler with a high efficiency condensing boiler as well replacing 2 of 4 aging chiller systems with more efficient units	2007	2012
Improve building insulation (including windows) during retrofits	Ongoing/In Progress			Nothing to report for 2011	SJGH will continue to use the highest quality materials available when retrofitting	2007	No End Date (Continuous)
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress	60	% of fridges are ENERGY STAR rated	Purchasing department uses Energy Star as a minimum standard for all appliance replacement purchases	Continue this practice	2007	No End Date (Continuous)
Behaviour change program							
Provide reminders for turning off lights (e.g., signs, stickers, messages)	In Development				Plan roll out and implementation	2012	No End Date (Continuous)
Promote hot water conservation	Ongoing/In Progress			SJGH has taken the initiative of replacing public washroom mechanical faucets with handsfree faucets	continue to replace mechanical faucets with handsfree	2011	2013
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Completed in 2011	17	% of total paper purchased contains 30% recycled content	endeavor to purchase however possible a higher recycle content		2005	No End Date (Continuous)
Purchase 40% post-consumer recycled paper	Completed in 2011	80	% of total paper purchased contains 40% recycled content	SJGH has a minimum purchase standard of 40% recycled content. We endeavor to purchase however possible a higher recycle content		2005	No End Date (Continuous)
Purchase 100% post-consumer recycled paper	Completed in 2011	3	% of total paper purchased contains 100% recycled content	endeavor to purchase however possible a higher recycle content		2006	No End Date (Continuous)
Behaviour change program							

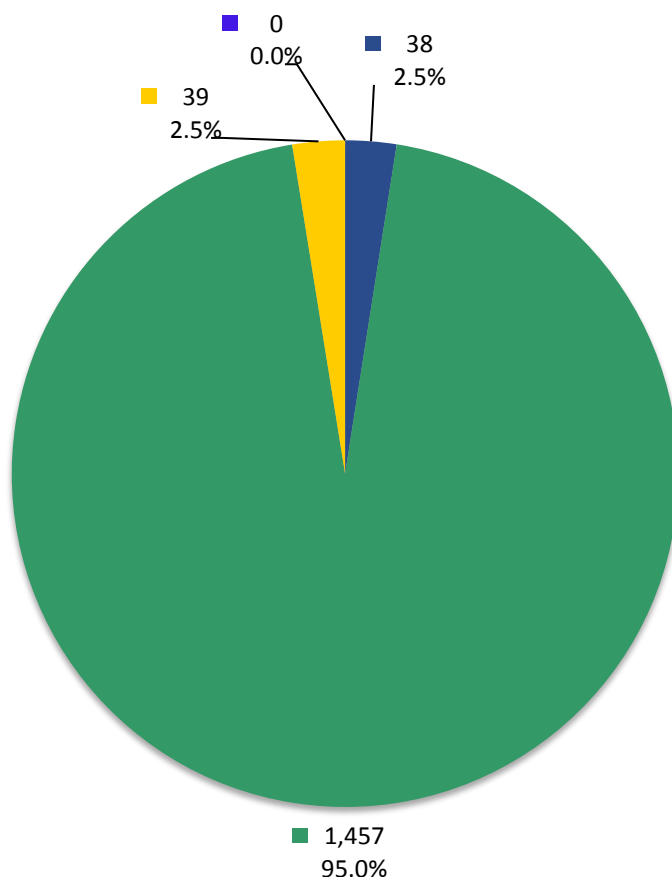
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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress			SJGH Senior team meetings have established a paperless protocol	SJGH will encourage this protocol at the managers level	2011	No End Date (Continuous)

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Actions to Reduce Provincial Emissions and Improve Sustainability							
The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the <i>Greenhouse Gas Reduction Targets Act</i> . Public sector organizations can optionally use this section to report on actions that will help British Columbia meet its provincial greenhouse gas reduction targets, engage the public, and improve environmental sustainability across all aspects of their organization.							
Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Other Sustainability Actions							
Water conservation							
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress			SJGH replaces all fixtures taken out of service with the most appropriate and efficient fixture available. We have taken the step of replacing public washroom faucets with hands free	SJGH will continue this practice	2011	2013
Waste reduction/diversion							
Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities	Ongoing/In Progress			SJGH has a comprehensive recycling program in place. Sjgh continues to work with waste vendors for our site to increase our effectiveness in diverting landfill waste. SJGH purchased 7 Genesis pans for SPD which will eliminate the need for disposable wraps	SJGH will continue this practice	2005	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress			SJGH has a comprehensive Haz Mat waste program in place. Sjgh continues to work with the wste vendor for our site to increase our effectiveness in diverting landfill waste. SJGH installed a SAFE-T-pump sytem in endoscopy which safely disposes liquid medical waste directly into the sanitary sewer	SJGH will continue this practice	2011	No End Date (Continuous)
Commuting to and from home							
Provide secure bicycle storage	Ongoing/In Progress			continue to increase bike storage capacity based on demand	will continue this practice	2009	No End Date (Continuous)

St. Joseph's General Hospital Greenhouse Gas Emissions by Source for the 2011 Calendar Year (tCO₂e*)



Total Emissions: 1,534

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion (Building Heating and Generators) and Electricity
- Supplies (Paper)
- Fugitive

Offsets Applied to Become Carbon Neutral in 2011 (Generated May 18, 2012 10:58 AM)

Total offsets required: **1,532**. Total offset investment: **\$38,300**. Emissions which do not require offsets: **2** **

*Tonnes of carbon dioxide equivalent (tCO₂e) is a standard unit of measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

** Under the *Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.