

Carbon Neutral Action Report School District No. 64 (Gulf Islands)

Executive Summary

Leading up to 2008, School District No. 64 (Gulf Islands) has, through the implementation of a number of energy reducing measures, made significant progress towards achieving carbon neutrality. The energy conservation measures included:

- Installation of “ground source” and “air to air” heat pump systems for building heating,
- Installation of heat recovery (HR) and carbon dioxide demand ventilation systems,
- Installation of “high efficiency” lighting systems, and
- Working with employees and students to help achieve further reductions in energy consumption.

In 2008, the district continued to achieve reductions in energy consumption, primarily through building system retrofits, but also in the areas of technology and the school bus transportation system. On the education side, the district supported the development of an environmental program on Saturna Island – the Saturna Ecological Education Centre (SEEC).

For 2009, the district will bring to conclusion a number of energy reducing initiatives started in 2008. We will also continue to work with and support our employee groups and our students to allow them to become more aware and educated regarding the challenge of reducing greenhouse gas emissions and promoting sustainability in our environment.

Objectives

- Financial responsibility - reducing operating costs
- Sustainability - balancing socio-economic and environmental issues for future generations
- Social responsibility - demonstrating leadership in this area
- Promotion of healthier communities

Part 1: Actions Taken to Reduce Greenhouse Gas Emissions in 2008

Overview

Primary actions for 2008 included the creation of the Saturna Ecological Education Centre (SEEC); the implementation of energy reducing measures in our buildings mechanical systems, technology department, and school transportation system; and the full conversion to Green Seal Approved products for our custodial department.

1.1 Mobile Fuel Combustion

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Provided driver training to reduce fuel use	In progress	Reduced fuel energy consumption	
Initiated new fleet maintenance program (could include – changing filters, checking tire pressure, regular check-ups)	In progress		
Established anti-idling behaviour change program (e.g. signs, stickers, messages)	Complete	Reduced fuel energy consumption	
Encouraged car pooling in fleet vehicles	Complete	Reduced fuel energy consumption	
Utilized biodiesel (B-20) for bus fleet	Complete	Reduced emissions	
Install Closed Crankcase Ventilation (CCVs) on bus fleet	In progress	70% complete. Reduced emissions	
Install Diesel Oxidation Catalysts (DOCs) on bus fleet	In progress	80% complete. Reduced emissions	

1.2 Stationary fuel combustion and electricity

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Replaced # computers with EnergyStar models	In progress	50% complete. Reduced electrical energy consumption	
Encouraged staff to use stairs	Complete	Elevator usage minimal. Reduced electrical energy consumption	
Turned off lights in unused rooms	Complete	Reduced electrical energy consumption	

Replaced Refrigerators (EnergyStar rated appliance)	Complete	Reduced electrical energy consumption	
Replaced standard bulbs with CFLs	Complete		
Undertaken lighting retrofit	Complete	Increased lighting efficiency. Reduced electrical energy consumption	
Implemented server virtualization	In progress	50% complete. Reduced electrical energy consumption	Implemented Blue Curl technology
Undertaken building energy audit at LOCATION(s)	Complete	All schools	
Installed high efficiency gas fired boilers	Complete	Reduced energy consumption	
Upgraded roofing installations	Complete	Reduced energy consumption	

1.3 Supplies

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Committed to use 100% recycled paper	Complete		
Initiated automatic double sided printing	Complete	Reduced paper consumption	Where practical
Developed document library (online and one printed copy) for large documents	Complete	Reduced paper consumption	District website - Human Resources documents; Health and Safety documents
Used laptops/tablets	In progress	Reduced paper consumption	All Principals now use laptops for meetings, etc.

1.4 Travel

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Installed Video Conferencing facilities	In progress	Greater use of Elluminate live for meetings	

1.5 Employee Engagement

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Provided climate change education	In progress	Increased awareness and conservation measures throughout district	Major focus - all grades
Provided conservation education	In progress	Increased awareness and conservation measures throughout district	Major focus + Saturna Ecological Education Centre (SEEC) - all grades
Held contests to change behaviour/make pledges	In progress	Increased awareness and conservation measures throughout district	Gulf Islands Secondary School contests
Held contests/support to generate ideas	In progress	Increased awareness and conservation measures throughout district	Gulf Islands Secondary School contests
Developed Green Teams	In progress	Increased awareness and conservation measures throughout district	Environmental Action Group Encouraging Responsibility (E.A.G.E.R.) at Gulf Islands Secondary School
Supported Green Teams (resources)	In progress	Increased awareness and conservation measures throughout district	Grants to green initiatives
Supported professional development	Complete	Increased awareness and conservation measures throughout district	Building Service Workers educated on green products
Added green work goal to performance management	Complete	Increased awareness and conservation measures throughout district	Building Service Workers have "Cleaning for Health" program

1.6 Sustainability Actions (others)

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Took water conservation measures – low flow showers or toilets, fix leaks	In progress	50% complete. Reduces water consumption	
Improved recycling measures	Complete	100% recycling program for paper, metal,	
Supported composting	Complete		
Purchased green cleaning products	Complete	General cleaners and sanitizers are Green Seal Approved; no solvent based products	
Used green (low-e paints)	Complete	All paints low or nil VOC	
Installed water recovery system for irrigation	Complete	Reduces potable water consumption	
Replace disposable cleaning products with cloth products	Complete		
Replace floor buffers with scrubber tools	Complete	Reduces electrical energy consumption	

Part 2: Plans to Continue Reducing Greenhouse Gas Emissions 2009 -- 2011

Overview	Primary actions for 2009 include the continuation of several energy conservation projects/measures that were initiated in 2008.
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2.1 Mobile Fuel Combustion				
Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Replace # of TYPE OF VEHICLE with MORE EFFICIENT VEHICLE/Hybrid	In progress	Reduces energy consumption		
Provide driver training to reduce fuel use	In progress	Reduces energy consumption		Training program continued from 2008
Initiate new fleet maintenance program (could include – changing filters, checking tire pressure, regular check-ups)	In progress	Reduces energy consumption		Program continued from 2008
Establish travel reduction goals	In progress	Reduces energy consumption		
Install Closed Crankcase Ventilation (CCVs) on bus fleet	In progress	Reduces fuel emissions		70% completed in 2008
Install Diesel Oxidation Catalysts (DOCs) on bus fleet	In progress	Reduces fuel emissions		80% completed in 2008
Review bus routing for efficiency reductions	In progress	Reduces fuel consumption		
2.2 Stationary Fuel Combustions (including electricity)				
Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Undertake workstation tune-ups to help staff understand what they can do to reduce personal energy use	In progress	Reduces electrical energy consumption		
Supply power bars – to turn off power to non-essential items when not in use (e.g. phone chargers)	In progress	Reduces electrical energy consumption		
Undertaken Monitor turn-off challenge	In progress	Reduces electrical energy consumption		
Replace # computers with EnergyStar models	In progress	Reduces electrical energy consumption		Remaining 50% to be completed in 2009
Encourage staff to use stairs	Complete	Reduces electrical energy consumption		
Implement server virtualization	In progress	Reduces electrical energy consumption	Implementing Blue Curl technology	Remaining 50% to be completed by 2010
Unplug unused equipment	In progress			
Install occupancy/carbon dioxide demand ventilation units	In progress	Reduces electrical energy consumption		To be completed in 2009
Review alternate building heating sources	In progress	Solar walls, solar panels. Reduces electrical energy consumption		
2.3 Supplies				
Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Use collaborative software to edit on-line	In progress	Use of "Wiki" to collaborate		
Creation of electronic report cards	In progress	Eliminates use of paper products		
Improvement of admin. server to encourage more electronic (less paper) access	In progress	Reduces use of paper products		
2.4 Travel				
Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Install Video Conferencing facilities	In progress	Reduces travel between islands	Continuance of programs to reduce district travel	
2.5 Employee Engagement				
Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Inclusion of student environmental action team in Policy development	In progress	Increased conservation measures for district	Students will work with Board on Policy changes	
2.6. Sustainability Actions (others)				
Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Take water conservation measures – low flow showers or toilets, fix leaks	In progress	Reduces water consumption		Remaining 50% retrofit to be completed by 2010
Improve recycling measures	In progress		Recycling fluorescent light tubes	Achieve 100% recycling by 2011
Support sustainable procurement practices	Complete			
Adopt low-carbon contracting practices	In progress			
Re-developing whole education system to support lower consumption lifestyle and learning that allows students to create personalized curriculum, as fostering environment and creativity is how we will improve the state of the world's environment.	In progress			