

Carbon Neutral Action Report School District No. 60 (Peace River North)

Executive Summary

In 1996 the district recognized the need to reduce the amount of electricity and natural gas and completed the first of two phases in 2003. Removal of excess lighting fixtures; modifications to the mechanical systems and installing HVAC controls resulted in a savings of 32% in natural gas, 22% in propane and 45% in electricity. School District #60 received the BC Hydro power Smart award in 2003. This award was presented in recognition of the districts reduction of all energy sources. The district is currently in the second phase which will see the replacement of older inefficient boilers; hot water heaters and compressors. Programs were installed to identify and monitor utilities on a on-going basis as well as identify future savings.

Objectives

The board considered three objectives in the plan for the energy reduction. The first consideration is to be in line with the 3 r's; reduce, reuse and re-cycle. The second consideration was to reduce utility expenditures and the third to provide opportunity for employee and student awareness. Both students and staff participated in the original energy reduction providing suggestions; after the project was completed these groups continue to provide feedback on the performance of the changes.

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

Overview

Installed pro heaters on a number of busses to reduce idle time for warm-up. These units consume considerably less diesel than vehicle idling to provide heat to the interior of the bus.

Replaced four gas furnaces with high efficiency units.

1.1 Mobile Fuel Combustion

on-going installation of pro heaters in busses.

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Provided driver training to reduce fuel use	in progress		District has received certification in this program and will be conducting training sessions on an ongoing basis
Initiated new fleet maintenance program (could include – changing filters, checking tire pressure, regular check-ups)	complete		district transportation standard
Established anti-idling behaviour change program (e.g. signs, stickers, messages)	complete		
Encouraged car pooling in fleet vehicles	complete		rural teachers carpool at two sites
Established travel reduction goals	in progress		

1.2 Stationary fuel combustion and electricity			
Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Undertaken workstation tune-ups to help staff understand what they can do to reduce personal energy use	complete		
Supplied power bars – to turn off power to non-essential items when not in use (e.g. phone chargers)	complete		district standard
Undertaken Monitor turn-off challenge	complete		district standard
Replaced # computers with EnergyStar models	in progress		
Asked staff to close blinds daily	complete		
Turned off lights in unused rooms	complete		
Replaced Refrigerators (EnergyStar rated appliance)	complete		district standard
Replaced other appliances (with EnergyStar rated appliance)	complete		district standard
Replaced standard bulbs with CFLs	complete		
Installed motion activated lights	complete		
Undertaken lighting retrofit	complete		lighting retrofit (electronic ballast /T8 lamps)and DDC control was completed in 2003. At the same time we removed 40% of the lighting as most if not all rooms were over lit.
Implemented server virtualization	in progress		
Utilized desk-top power management settings on computer	complete		
Initiated corporate computer shut-down/wake-up for maintenance	complete		
Unplugged unused equipment	complete		
Undertaken building energy audit at LOCATION(s)	complete		BC Hydro program in preparation for the ESCO complete district program in 2002/3
Initiated or completed a building energy retrofit	in progress		under ESCO program
replacement of inefficient furnace/boilers	complete	GHG and fuel dollar savings	ongoing program within the district to replace furnace/boilers either on a needed basis or within the framework of the annual capital plan.
reuse "discharge" air		as above	rather than expelling warm air to the outside this air is used to heat/ventilate crawl space before venting to the exterior
1.3 Supplies			
Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Initiated automatic double sided printing	complete		where possible
Committed to hold paperless meetings	complete		
Developed document library (online and one printed copy) for large documents	complete		
Used collaborative software to edit on-line	complete		
Re-used non-confidential scrap paper	complete		
Used laptops/tablets	complete		

Actions on non-paper related supplies:			
Chose "Green" items from Distribution Centre	complete		
Encouraged re-use of furniture and equipment	complete		
1.4 Travel			
Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Trained staff in the use of Live Meeting (or other desktop collaborative software)	in progress		encourage where possible; currently using Elluminate, live meeting. Video and tele-conf
Installed Video Conferencing facilities	in progress		
1.5 Employee Engagement			
Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Provided climate change education	complete		as offered by Northern Action Environmental team
Provided conservation education	complete		partner with Northern Environmental Action Team (NEAT)
Developed Green Teams	complete		various schools have joined in progressing to green designation
Supported professional development	complete		Energy Manager has completed BC Hydro/CIEL week training for Energy Managers.
added new board committee			board added Social Responsibility committee with a mandate to direct environmental issues as our districts number one goal (in achievement contract)
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		We have one waterless urinal at Upper Pine Elementary and two at Clearview Elementary on trial. Low flow toilets are installed where possible. As well all new urinal install/replacements are equipped with low flow flush sensors.
Reduced/replaced bottled water with filtered or refrigerated water	complete		staff bring refillable containers for water consumption rather than plastic bottled water
Improved recycling measures	complete		paper and cardboard are presently being collected bi-weekly. Extended programs are being initiated in a number of locations this/next year. Wood and steel are collected at facilities and moved to scrap collection sites.
Used re-usable dishes	complete		staff rooms and teaching pods.
Purchased green cleaning products	in progress		products that will perform are used
Used green (low-e paints)	complete		
Supported sustainable procurement practices	complete		

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

Overview

Our Board is committed to the reduction of greenhouse gas. However having to operate the district with limited funding leaves little to use for the reduction of GHG. Each year we spend some of our AFG on carbon reduction. We recognize that the district has the

2.1 Mobile Fuel Combustion

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Provide driver training to reduce fuel use	in progress			Driver trainer has received all training and this program is offered yearly.
Initiate new fleet maintenance program (could include – changing filters, checking tire pressure, regular check-ups)	in progress			
Establish anti-idling behaviour change program (e.g. signs, stickers, messages)	in progress			
Encourage car pooling in fleet vehicles	in progress			District supplied vehicle to transport employees to Clearview and Prespatou.
Change from gas to electric lawn maintenance equipment			if technology could be such that we could use a 12 foot grass cutter for a full day we would support	
Establish travel reduction goals	in progress			
electric trimmers			one on trial	

2.2 Stationary Fuel Combustion (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			on-going
Supply power bars – to turn off power to non-essential items when not in use (e.g. phone chargers)	in progress			on-going
Undertaken Monitor turn-off challenge	in progress			
Replace # computers with EnergyStar models	in progress			as computers are replaced

Ask staff to close blinds daily	in progress		
Turn off lights in unused rooms	in progress		
Replace Refrigerators (EnergyStar rated appliance)	in progress		as units are replaced
Replace other appliances (with EnergyStar rated appliance)	in progress		as units are replaced
Install multi-function devices (and remove stand-alone printers/faxes)	in progress		
Replace standard bulbs with CFLs	in progress		
Install motion activated lights	in progress		
Undertake lighting retrofit	in progress		continuing to monitor and install occupancy sensors
Utilize desk-top power management settings on computer	in progress		
Initiate corporate computer shut-down/wake-up for maintenance	in progress		
Unplug unused equipment	in progress		
Apply for LEED existing building rating	in progress		
Undertake building energy audit at LOCATION(s)	in progress		possibly to identify saving opportunities..
Initiate or complete a building energy retrofit	in progress		due to the energy upgrade in 2000-2003 we are now in the monitor and identify additional opportunities mode.
continue with items identified in 1.2 items 92-95			as budgets allow.

2.3 Supplies

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Commit to use 30% recycled paper	in progress		we have tried using recycled paper in the past and the paper jammed/left paper bits in the machines. We spent a fair bit of time repairing copiers/fax machines before going back to regular paper	
Initiate automatic double sided printing	in progress			
Change document template margins	in progress			
Commit to hold paperless meetings	in progress			
Develop document library (online and one printed copy) for large documents	in progress		the board member/senior staff presently use laptops with minutes/correspondence etc posted to their machines	
Use collaborative software to edit on-line	in progress			

Re-use non-confidential scrap paper	in progress	scrap paper--that's our "post-it" notes
Use laptops/tablets	in progress	
Restructure a process to use less paper	in progress	
Actions on non-paper related supplies:		
Purchase cradle to cradle goods	in progress	
Choose "Green" items from Distribution Centre	in progress	
Encourage re-use of furniture and equipment	in progress	

2.4. Travel

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Set a X% Travel reduction goal	in progress			
Train staff in the use of Live Meeting (or other desktop collaborative software)	in progress			
Install Video Conferencing facilities	in progress			

2.5. Employee Engagement

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Provide climate change education	in progress		Staff/student is an ongoing process. We have been looking for a program to institute in the schools starting at the K/G level.	
Provide conservation education	in progress			
Develop Green Teams	in progress			
Provide green tips	in progress			
social responsibility			board will continue to direct environmental issues	

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			
Improve recycling measures	in progress			
Support composting				
Use re-usable dishes	in progress			
Purchase green cleaning products	in progress			
Use green (low-e paints)	in progress			
Support sustainable procurement practices	in progress			
ADDITIONAL ACTIONS TAKEN OR PLANNED	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Geo-Thermal heating sect 2.2	planned		The district is considering the possibility of geo-thermal for heating. At this time more study is needed as well as seeking funding opportunities.	