

Carbon Neutral Action Report School District No. 20 (Kootenay - Columbia)

Executive Summary

School District No. 20 (Kootenay Columbia) has been striving toward and contributing to carbon neutrality for a number of years. This has and continues to be a priority area to focus effort and resources. The District established a baseline of GJ energy used and carbon emissions over the past four years and continues to track and attempt to reduce our carbon footprint. We have developed an energy retrofit program for our buildings, applied for and received PSECA funding and those initiatives are now in progress. There are many other initiatives the District has focused on: an anti-idling program has been completed; Trees for Tomorrow applications and plantings are in progress; applications for NRCAN funding to provide catalytic conversion on most of our busses has been completed; newer, cleaner technology busses are replacing our aging fleet; a program of planting deciduous trees on our grounds to allow sun in winter and shade in the summer months to reduce energy use is in process; and we completed training of our school bus drivers in the "thinking driver" method of fuel conservation/minimizing greenhouse gas emissions. In addition, we are reprogramming all of our DDC systems to maximize the efficiency of our building's HVAC systems as well as consolidating computer servers. We recently completed the upgrading of copiers in the District thereby utilizing less energy and consumption of resource. We are implementing automated computer shutdown software and the Board of Education has completed signing the British Columbia Climate Action Charter. The Board is further considering a District Wide Environmental policy and reviewing the Destination Conservation program for our schools.

Objectives

Employee Engagement - increasing the awareness of GHG emissions and the resultant energy savings.
Social Responsibility - demonstrating leadership in taking ownership of GHG emissions and taking action on GHG emissions.
Promoting awareness of the savings gained so staff and students can take this knowledge and use it in their private lives as well.
Financial Responsibility - reducing operating costs by taking advantage of financial grants and implementation of newer technologies to gain system-wide efficiencies.
Promoting healthier lifestyles and academic achievement through improvement of student/staff air quality, improvement of lighting and overall building environments.

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

Overview

The District has established a baseline of GHG emissions and energy consumption. We have retro-fitted 12 school busses with catalytic converters and continue to promote our anti-idling program. We have planted several trees throughout the District and purchased two new clean burning school busses. We have worked on planning for our building energy retro-fit program and have tendered photocopiers to allow reductions of paper and enabling electronic document management at all schools. We have commenced implementation of computer software to automatically shut computers down thereby saving on energy costs. As well, we are reviewing paperless meetings and commenced training to staff utilizing current technologies (i.e. eluminate) presenting a reduction in travel.

1.1 Mobile Fuel Combustion

- 1) School bus drivers trained in "Thinking Driver" method of reducing fuel consumption/GHG emissions.
- 2) Instituted an anti-idling program for all School District drivers.
- 3) Purchased two clean burning school buses.
- 4) installed catalytic converters on several school buses.

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Provided driver training to reduce fuel use	In progress	Will check fuel use in 6 mos.	Bus drivers trained, operations staff in progress.
Established anti-idling behaviour change program (e.g. signs, stickers, messages)	Complete	All operations and Bus drivers trained.	Trained the trainer in Thinking Driver program
Encouraged car pooling in fleet vehicles	In progress		
Encouraged use of public transit/active transportation	In progress	Shared Transportation with BC Transit	Students utilize public transit via shared agreement with BC Transit in Trail, BC
Installation of catalytic converters on buses	Complete		Completed February 2009

1.2 Stationary fuel combustion and electricity

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Replaced # computers with EnergyStar models	In progress		Computer Evergreen Plan allowing continual upgrades
Turned off lights in unused rooms	In progress		A number of schools follow this policy
Replaced Refrigerators (EnergyStar rated appliance)	In progress		
Replaced other appliances (with EnergyStar rated appliance)	In progress		
Installed multi-function devices (and removed stand-alone printers/faxes)	In progress	ability to electronically scan documents from photocopiers	Tendering of copiers in 2008, awarded in 2009.
Replaced standard bulbs with CFLs	In progress		
Installed motion activated lights	In progress		
Undertaken lighting retrofit	In progress		
Implemented server virtualization	In progress		
Utilized desk-top power management settings on computer	In progress		
Initiated corporate computer shut-down/wake-up for maintenance	In progress		
Unplugged unused equipment	In progress		
Undertaken building energy audit at LOCATION(s)	Completed	Identified retro-fit needs	Applied for and received PSECA funding. Audit covered all sites.

1.3 Supplies			
Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Committed to hold paperless meetings	In progress		
Developed document library (online and one printed copy) for large documents	In progress		
Restructured a process to use less paper	In progress	Elimination of paper pay stubs and move to electronic timesheets.	Requesting staff move away from paper pay statements utilizing email and reviewing payroll software for new efficiencies.
Actions on non-paper related supplies:			
Chose "Green" items from Distribution Centre	In progress		
Encouraged re-use of furniture and equipment	In progress		
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	Reduction in travel costs in order to attend meetings	Eluminate software is being promoted in the District to support professional development activities and for meetings.
1.5 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		
Purchased green cleaning products	In progress		
Used green (low-e paints)	In progress		
Community Garden	Complete/In progress		Community Gardens approved/supported to create a green spaces and provide educational opportunities for students and residents.
Zero Waste Lunch Programs	In progress		No waste lunch programs are being promoted at some school sites.
Part 2: Plans to Continue Reducing Greenhouse Gas Emissions 2009 -- 2011			
Overview	The District has signed on to the BC Climate Action Charter in 2009. Many of the initiatives commenced pre 2009 will continue as defined in section 1, with consideration for District Policy supporting current and new environmental initiatives.		

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	Reducing fuel consumption	Replacement of bussing fleet with more energy efficient models	Ongoing
Provide driver training to reduce fuel use	In progress	monitor fuel use	School bus drivers have been trained, maintenance staff to follow.	Complete by June 2009
Establish anti-idling behaviour change program (e.g. signs, stickers, messages)	In progress	monitor fuel use	School bus drivers have been trained, maintenance staff to follow. Furthermore, some schools are promoting for parents and staff.	Complete by June 2009
Encourage use of public transit/active transportation	In progress	Reduced student transportation costs	The District has maintained a longstanding agreement with BC Transit for students to ride public transit to and from school in Trail, BC	Ongoing
Change from gas to electric lawn maintenance equipment	In progress	Reviewing replacement of industrial lawn mowers and district operational equipment to more efficient models (electric models currently unavailable)	Budget allocations being provided to allow equipment replacement.	2009 - 2014
2.2 Stationary Fuel Combustion (including electricity)				
Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Replace # computers with EnergyStar models	In progress	Maintaining current technologies for the District - by age of equipment.	Computer Evergreen Plan	5 to 8 year plan in place
Turn off lights in unused rooms	In progress	Reducing unnecessary electrical consumption	A number of locations have initiated "lights off" in vacant spaces as well as installation of motion sensors.	Ongoing
Replace Refrigerators (EnergyStar rated appliance)	In progress		As appliances wear out, replace with energy star.	Ongoing
Replace other appliances (with EnergyStar rated appliance)	In progress		As appliances wear out, replace with energy star.	Ongoing
Install multi-function devices (and remove stand-alone printers/faxes)	In progress		Multi function copiers have been purchased, reducing stand alone copiers/faxes.	2009
Replace standard bulbs with CFLs	In progress	monitor energy use	Incandescent bulbs are replaced with CFL's as they burn out.	
Install motion activated lights	In progress	monitor energy use	As part of our retro-fit program gym lights will be operated by motion sensors.	
Undertake lighting retrofit	In Progress	monitor energy use	Many schools are undergoing a lighting retrofit to improve the classroom environment and save energy.	Dec 31st 2009
Implement server virtualization	In progress		District Office servers being evergreened to single units replacing multiple servers thereby saving energy.	Partial 2009
Utilize desk-top power management settings on computer	In progress	Units changed.	Installing automated computer shutdown software and setting printer defaults to power save mode District Wide	2008 through 2009

Unplug unused equipment	In progress		Some schools shut down vending equipment during non operational periods.	Continual
Initiate or complete a building energy retrofit	In progress		District wide energy retrofit in progress upgrading mostly electrical and HVAC related systems	Completion December 2009/Early 2010
JL Crowe New School Construction	In progress		Solar wall and upgraded energy efficient systems being utilized in new school construction.	Sep-09

2.3 Supplies

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Commit to hold paperless meetings	In progress		Board of education is reviewing paperless Board meetings.	2009/2010
Develop document library (online and one printed copy) for large documents	In progress	Elimination of paper files	Laser fiche document management software previously implemented in the District and is being expanded into new areas of utilization.	continual
Actions on non-paper related supplies:				
Encourage re-use of furniture and equipment	In progress		All surplus district equipment is offered for others to use.	continual

2.4. Employee Engagement

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Provide climate change education	In progress		Educational initiatives/recycling programs offered in various schools on a continual basis.	continual
Policy	In progress	Policy document.	Considering policy to promote awareness and support staff and students to be environmentally responsible.	2009/2010
BC Climate Action Charter	In progress	Finalized Agreement	Board supporting and signing on to the BC Climate Action Charter	2009
Destination Conservation	In progress		We will continue reviewing this group to integrate into our schools.	2009

2.5. Sustainability Actions (others)

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Support composting	In progress		Many schools have recycling and composting programs in place.	