

Carbon Neutral Action School District 54 (Bulkley Valley)

Executive Summary

School District 54 (Bulkley Valley) has been undertaking projects to reduce costs and carbon emissions for some time. For this initiative, we began with a review and assessment of related work and efforts to date. Generally, our district has been proactive in reducing costs and GHG emissions through Direct Digital Controls (DDC), lighting sensors, lighting and boiler upgrades using limited Annual Facility Grant (AFG) funds. Web based controls allow evening and weekend setback temperatures while major initiatives with Air Handling Units (AHU's) and new boilers provide increased efficiency. That review was followed by an assessment of projects that would provide the 'highest yield' in terms of GHG reductions. We then assessed the costs and potential funding sources for major projects from a cost/benefit perspective. We also undertook an assessment of fleet operations and opportunities for reduced consumption through fuel efficient replacement vehicles. We assessed opportunities for reduced travel time within existing bus routes. We assessed the opportunities for, and impacts of, reduced GHG emissions through paperless board meetings. Finally, we assessed the opportunities for, and impacts of, reduced GHG emissions associated with reducing or eliminating the practise of change associated with the Board's Policy Manual and its distribution.

Objectives

Reduce idling time; Improve bus routing efficiency; move to paperless board and committee meetings; continue with Annual Facility Grant projects that reduce consumption, and leverage third party funding, including Direct Digital Controls, mechanical, lighting, etc.; increase awareness in all schools of the importance of reduced energy consumption.

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

Overview:

Our district's strategy has been to reduce GHG emissions in a meaningful way by assessing the potential 'bang for buck' of various Annual Facility Grant type projects. Targeting 'high yield' projects had 2 primary benefits: first, GHG emissions would be reduced in a significant way and second, high yield projects presented a better opportunity to leverage third party funding. In 2008, our primary projects included boiler replacement and lighting / Direct Digital Control upgrades.

1.1. Mobile Fuel Combustion:			
Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Replaced # of TYPE OF VEHICLE with MORE EFFICIENT VEHICLE/Hybrid	complete		multi year plan. 4 new fuel efficient vehicles in 2008.
Established anti-idling behaviour change program (e.g. signs, stickers, messages)	in progress		Primarily with bussing & Maintenance - ongoing effort.
Encouraged car pooling in fleet vehicles	complete		primarily with District / Board level.
Other: (Please enter any items not included in the above list)			
Student Involvement with HASTE (Hub for Action on School Transportation Emissions)	in progress		
Review of bussing routes	complete		no real opportunity for efficiencies found.
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	in progress		ongoing awareness initiative
Undertaken Monitor turn-off challenge	in progress		ongoing awareness initiative
Replaced # computers with EnergyStar	complete		
Turned off lights in unused rooms	in progress		ongoing awareness initiative
Installed multi-function devices (and removed stand-alone printers/faxes)	in progress		
Installed motion activated lights	complete		Muheim Memorial - motion sensors in each classroom. Sensors in Board room
Undertaken lighting retrofit	complete		Muheim Memorial complete lighting upgrade to T-8s; Board Office upgraded to T5 lighting
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		all locations (lighting only). 3 schools have full mechanical/energy audit
Initiated or completed a building energy retrofit	complete		Telkwa Elementary boiler/gym HVAC upgrade
Other: (Please enter any items not included in the above list)			
Roofing Projects - various	in progress		ongoing initiative - roof insulation increased

1.3. Supplies:

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Initiated automatic double sided printing	in progress		primarily at district level
Committed to hold paperless meetings	complete		
Re-used non-confidential scrap paper	complete		
Used laptops/tablets	complete		
Restructured a process to use less paper	in progress		elimination of Policy Manual
Actions on non-paper related supplies:			
Purchased cradle to cradle goods			
Chose "Green" items from Distribution Centre	complete		custodial supplies primarily

1.4 Travel (Report on Travel is required only if a core government ministry/tribunal, where travel is paid directly from the

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Set a X% Travel reduction goal			
Trained staff in the use of Live Meeting (or other desktop collaborative software)	complete		Elluminate, Moodle, etc

1.5 Employee Engagement

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Provided climate change education	in progress		
Provided conservation education	in progress		

1.6 Sustainability Actions (others)

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Ran dishwasher only when full	complete		
Reduced/replaced bottled water with filtered or refrigerated water	complete		
Used re-usable dishes	complete		
Purchased green cleaning products	complete		
Used green (low-e paints)	complete		Low VOC paints

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

Overview:

We will continue to support major facility renovations that are prioritized, cost-effective, and effective in reducing GHG emissions in a significant way. We will continue to install sensors to ensure lights are turned off, DDC controls to ensure maximum heating/cooling efficiency; work with Hydro and government to access funding programs.

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		ongoing vehicle replacement	
Establish anti-idling behaviour change program (e.g. signs, stickers, messages)	in progress		ongoing reminders	
Encourage alternatives to travel in fleet vehicles – bicycles, scooters, electric carts	in progress		ongoing efforts with District level itinerant staff and board	

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		ongoing initiative	
Undertaken Monitor turn-off challenge	planned		school based	2010
Turn off lights in unused rooms	planned		Houston and Smithers Secondary, Walnut Park, Twain Sullivan Elementary and the Maintenance Shop lighting upgrades c/w sensors	summer2009
Install multi-function devices (and remove stand-alone printers/faxes)	in progress			2011-2012
Replace standard bulbs with CFLs	in progress			
Install motion activated lights	in progress			
Undertake lighting retrofit	in progress			
Implement server virtualization	in progress			2010
Utilize desk-top power management settings on computer	in progress		ongoing	
Initiate corporate computer shut-down/wake-up for maintenance	in progress			2010
Unplug unused equipment	in progress			
Initiate or complete a building energy retrofit	in progress		location and scope depends on leveraged funding (hydro, PSECA)	
Other: (Please enter any items not included in the above list)				
Photocopier purchases: RFP's evaluated, in part, on energy consumption	in progress		began in fiscal 2007-08; ongoing replacement programme	

2.3. Supplies:

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Commit to use 30% recycled paper	planned		ongoing initiative with copy paper	2011-2012
Commit to hold paperless meetings	in progress		board, committees & Administrators	2010
Use collaborative software to edit on-line	in progress			
Re-use non-confidential scrap paper	in progress			
Actions on non-paper related supplies:				
Encourage re-use of furniture and equipment	in progress		ongoing initiative.	

2.4. Employee Engagement

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Provide climate change education	in progress		school based	
Provide conservation education	in progress		school based	

2.5. 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	planned		auto shut off valves on urinal tanks	2010
Improve recycling measures	planned		computers stripped and sorted by component & sent to depot	ongoing
Use green (low-e paints)	in progress		ongoing initiative - low VOC	