

School District No. 20 Kootenay Columbia - 2009 Carbon Neutral Action Report

Executive Summary

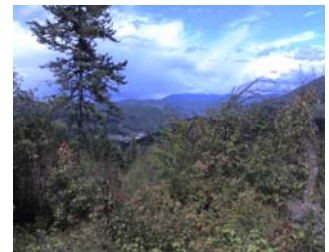
School District No 20 is committed to continuing on the path of planning and completing upgrades to our physical plants and our fleet vehicles that will both reduce carbon emissions and energy consumption. We are also committed to support and train our students and staff in practises that support a sustainable lifestyle.

School District No 20 is also working to educate students and staff in sustainable practises such as solar hot water & power, recycling, growing produce, and composting.

Overviews

Actions Taken to Reduce Greenhouse Gas Emissions in 2009

In 2009 School District No. 20 Kootenay Columbia began implementing key upgrades/retrofits Identified in our 2006 Energy Management plan, these upgrades included; high efficiency lighting retro-fits in all District owned buildings, high efficiency furnace installation at one site and high efficiency domestic hot water heaters at two sites. SD #20 also applied for and received a Solar BC grant to install solar hot water at J.L. Crowe High School. The School District also implemented an anti idling policy in 2009 and All drivers of School District vehicles have been trained in the Smart Driver course to reduce fuel use and carbon emissions.



Plans to Continue Reducing Greenhouse Gas Emissions 2010 – 2012

As an education leader in our area of the province School District No 20 understands the need to lead by example. It is important that we show that we can become carbon neutral in 2010, that it is economically possible, it is financially rewarding, and that it is beneficial to our environment.

School District No. 20 plans to continue on this path in the next three years with plans to purchase Utility Manager software to more effectively measure and manage utility use through the district.

School District No. 20 has plans to purchase and install GPS devices on all fleet vehicles in order to improve anti idling compliance and efficient driving habits. The GPS devices will also allow us to more efficiently and effectively deploy staff throughout our district increasing our GHG savings.

We are also working on plans with the City of Trail to connect our sports field sprinkler systems to their weather station which will drastically reduce the amount of irrigation water we use and reduce the amount of GHG emissions the City produces during the treatment of their water. We also plan to connect our irrigation systems to our Direct Digital Controls system so we can make adjustments from the office which will reduce travel to and from sites for adjustments.

School District No 20 is currently exploring a partnership with Teresan Gas to use waste heat from Teck's Lead and Zinc Smelter in Trail to heat our High School and Middle School which will reduce our GHG's from these two schools to nearly zero.

School District No. 20 embraces the continuing challenge to reduce GHG emissions and utility costs as we move forward.

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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 *Greenhouse Gas Reduction Targets Act*.

Action	Status (as of 12/31/09)	Performance to Date (as of 12/31/09)	Steps Taken in 2009	Steps Planned for 2010 -2012	Start Year	End Year
Mobile Fuel Combustion (Fleet and other mobile equipment)						
Vehicle fuel efficiency						
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	0 % of vehicles are fuel- efficient models	Replaced one tradesman van with a van with a smaller more efficient engine.	Continue replacement with more efficient vehicles	2008	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	0 % of vehicles down-sized since start year indicated	Replaced one 84 passenger school bus with a 76 passenger bus	Continue replacement with more efficient vehicles	2005	
Perform regular fleet maintenance to improve fuel-efficiency	Complete	100 % of vehicles are subject to regular maintenance for fuel efficiency	Regular maintenance schedule			
Replace small maintenance vehicles with more fuel-efficient models	Ongoing/In Progress	0 % of small maintenance vehicles are fuel-efficient	Replaced one ride on mower with a smaller more efficient mower.	Continue replacement with more efficient vehicles		
Behaviour change program						
Provide fleet driver training to reduce fuel use	Ongoing/In Progress	100 % of current drivers are trained	Training provided to our existing drivers	Training provided to new drivers	2009	No End Date (Continuous)
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Ongoing/In Progress	100 All drivers have been trained in "Smart Driving" which includes anti-idling. Anti-idling signs have been posted at most school sites.	Training provided to our existing drivers	Training provided to new drivers	2009	No End Date (Continuous)
Other Mobile Fuel Combustion Actions						
We have a budget proposal in for the 2010-11 school year to purchase a GPS tracking system for all of our fleet vehicles in order to monitor and encourage more efficient travel within district and reduced idling times. We have trained our school bus drivers in the "Thinking Driver" method of fuel conservation.	In Development			If funding is approved we will install and monitor travel and idling	2010	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)						
Owned buildings						
Establish energy performance baseline for owned buildings	Complete	100 % of owned buildings have an established energy performance baseline	All buildings have an energy use baseline with the exception of our new high school which doesn't have a full year of service yet.		2009	2010
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	60 % of owned buildings have undergone energy retrofits since start year indicated	60% have undergone lighting retro-fits	The other 40% of buildings requiring lighting retro-fits will be completed.	2008	2011
Retrofitting owned buildings						

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Action	Status (as of 12/31/09)	Performance to Date (as of 12/31/09)		Steps Taken in 2009	Steps Planned for 2010 -2012	Start Year	End Year
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	10	% of retrofits (captured above) had heating, cooling, and ventilation systems upgrades	One building had it's furnace replaced with a high efficiency furnace. Two buildings had hot water tanks installed so that the large boilers which heat the buildings and hot water could be shut down in warm weather.	Currently working with Teresan Gas on potential green energy solutions for some buildings	2010	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	100	% of retrofits (captured above) had lighting systems upgrades	60% of buildings had complete lighting upgrades, old fixtures replaced with energy efficient fixtures and due to the higher efficiency fewer fixtures installed.	Final retro-fits will be completed and we will work with Fortis to plan further electrical retro-fits such as emergency lighting.	2008	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	100	% of retrofits (captured above) had control system upgrades or adjustments	HVAC systems monitored closely to reduce operating times through our DDC control systems	Plan to provide further training to our controls operators to give them the knowledge to further reduce our utility use and GHG's	2009	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	0	% of retrofits (captured above) had insulation improvements	Hired a consultant to plan for window replacements in two schools	Plan to complete the window replacements as funding allows	2009	No End Date (Continuous)
Install an on-site renewable energy demonstration project	Ongoing/In Progress	0	% of retrofits (captured above) had on-site renewable energy components	Applied for solar BC funding for installation of solar hot water systems at our three high schools, received a grant for one school.	Hope to be able to install the system within the estimated cost.	2009	2010
IT power management							
Install power management software which shuts down computers outside of regular business hours	Complete	100	% of computers shut down automatically outside of regular business hours	completed software installation		2009	2009
Implement server virtualization	Ongoing/In Progress	10	% of servers have been virtualized since start year indicated	Ongoing	Further virtualization of servers	2009	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Complete	100	% of computers have auto-sleep settings applied	completed software installation		2009	2009
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Ongoing/In Progress	20	% reduction in printers, copiers, and/or fax machines since start year indicated	Some reduction in personal printers with installation of new multi function copiers	Further reduction of personal printers	2009	No End Date (Continuous)
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Ongoing/In Progress	50	% of devices have auto-sleep settings applied	50% completed	Further installations of auto-sleep settings	2009	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress			All new purchases are energy star rated.	Further replacements with energy star models	2005	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			All new appliances purchased are energy star rated.	Further replacements with energy star models	2008	No End Date (Continuous)
Replace other appliances or electronic devices with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress			All new appliances purchased are energy star rated.	Further replacements with energy star models	2008	No End Date (Continuous)
Behaviour change program							
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress			Brought to some staff meetings	More focus on personal habits	2009	No End Date (Continuous)

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Action	Status (as of 12/31/09)	Performance to Date (as of 12/31/09)		Steps Taken in 2009	Steps Planned for 2010 -2012	Start Year	End Year
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress			Brought to some staff meetings	More focus on personal habits	2009	No End Date (Continuous)
Supplies (Paper)							
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	5	% of network printers or photocopiers are set to automatic double-sided	Photocopiers re-set to automatic double sided	Further settings on photocopiers changed to auto double sided	2009	No End Date (Continuous)
Reduce default margin size in standard document templates (e.g., letters, briefing notes, forms, etc.)	Ongoing/In Progress	5	Ongoing	Started to change settings	Further settings changed	2009	No End Date (Continuous)
Electronic media in place of paper							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	5	% of staff workstations with software installed	Began installing the software	Further installations	2009	No End Date (Continuous)
Use electronic document library for filing common documents	Ongoing/In Progress	25	% of documents filed	Began the process	Further document filing	2008	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress	90	% of materials posted	Many documents are being posted on our website	Further website posting of SD documents	2005	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Complete	100	% of electronic payroll	Moved to electronic paystubs		2009	2010