



School District #81 Fort Nelson, BC

Carbon Neutral Action Report



School District #81 (Fort Nelson)- 2009 Carbon Neutral Action Report

Executive Summary

School District #81 (Fort Nelson) continues to actively identify ways to reduce their carbon footprint in preparation for carbon neutrality in 2010.

A consultant was hired this year to prepare a District Energy Report to assist in planning long term energy saving strategies. As well, an Asset Detail Report was prepared by VFA Canada Corporation on behalf of the Ministry of Education. Once again, this document will prove invaluable for planning purposes.

We are a PowerSmart partner with B.C. Hydro. We have completed light upgrades in two of our buildings and continue to complete smaller projects with our goal to complete light upgrades in all of our buildings, into the future.

We continue to be engaged in boiler retrofits on an ongoing basis to reduce energy consumption. We will continue to ensure maximum heating/cooling efficiency through the installation of DDC controls, whenever possible.

Individual school Green Clubs are encouraged with a focus on an increased activity level and leadership role of our District Green Club.

We hope to be recognized as a leader in the introduction of energy conservation initiatives that promote behavioural change for environmental sustainability.

Overviews

Actions Taken to Reduce Greenhouse Gas Emissions in 2009

School District #81 took part in a number of initiatives towards carbon neutrality throughout 2009. Under the "Stationary Fuel Combustion, Electricity and Fugitive Emissions" section of the Actions Towards Carbon Neutrality in the 2009 Carbon Neutral Action Report you will note that we have completed light retrofits in two of our buildings with plans to complete retrofits in our rural school and sections of our remaining buildings in 2010/2011; that we participated in a B.C. Hydro/Fort Nelson Municipality subsidized installation of an exchange of generated power from individual local diesel powered generators to B.C. Hydro high efficiency generators; that we have hired a consultant to prepare a District Energy Report for planning purposes; and that we actively engaged in an attempt to reduce paper through using specific features of our photocopiers as well as the use of Visa cards.

Initiatives to be highlighted in our “Actions to Reduce Provincial Emissions and Improve Sustainability” portion of our 2009 Carbon Neutral Action Report include: a number of activities initiated by our local school Green Club including the planting of trees and plants, worm farm composting, and recycling programs; and a change to the use of green products for cleaning in our buildings.

Over the next three years School District #81 (Fort Nelson) will focus on identifying initiatives that promote behavioural change for environmental sustainability.

We will maintain our partnership with B.C. Hydro to continue with our lighting retrofit program and we will use our recent consultant reports to develop an energy plan to address key areas of need. We will continue to maintain and improve our existing facility systems. We will continue to identify projects that reduce our overall operating costs through energy consumption.

We will continue to encourage the activities of our school based Green Clubs and use the District Green Club to educate and encourage employee and student participation and commitment to reduce greenhouse gas emissions.

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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			As vehicles are replaced consideration will be made to purchase more fuel efficient models/non replacement.	Review replacement plan.	2005	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	11	% of vehicles down-sized since start year indicated	Same as above.	Review replacement plan.	2005	No End Date (Continuous)
Perform regular fleet maintenance to improve fuel-efficiency	Ongoing/In Progress	100	% of vehicles are subject to regular maintenance for fuel efficiency	Oil/air filter 2x a year/ air pressure checked weekly.	Same as previous year.	2002	No End Date (Continuous)
Replace small maintenance vehicles with more fuel-efficient models	Ongoing/In Progress			Will be considered when plan is updated.	Review replacement plan.	2005	No End Date (Continuous)
Behaviour change program							
Provide fleet driver training to reduce fuel use	In Development				Provide training.	2010	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			Had anti idylng signs produced.	Installation of signs, development of policy.	2009	2011
Encourage carpooling in fleet vehicles	Ongoing/In Progress			Encouraged maintenance staff to carpool when appropriate.	Continue to encourage maintenance staff to carpool when appropriate.	2009	No End Date (Continuous)
Other Mobile Fuel Combustion Actions							
Reduction in the use of car plug ins.	In Development				Determination of reasonable temperature for car plug ins to be used.	2010	2011
Mail Contract with Government-reduction of fuel consumption as there is one centralized pick up area.	Ongoing/In Progress			Signed a contract with the B.C. Provincial Government to handle their mail distribution.	Continue with program.	2009	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Planning/management							
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	64	% of buildings have a real time metering system installed	None Taken.	Installation of more programmable thermostats.	2001	No End Date (Continuous)
Owned buildings							
Establish energy performance baseline for owned buildings	In Development				Use baseline data to attempt reductions in energy usage.	2010	No End Date (Continuous)
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	64	% of owned buildings have undergone energy retrofits since start year indicated	Lighting retrofits in some buildings and boiler replacement/reduction in GW Carlson School.	More lighting retrofits planned.	2004	No End Date (Continuous)
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	64	% of retrofits (captured above) had heating, cooling, and ventilation systems upgrades	Heating and ventilation upgrade at GW Carlson School.	Ventilation at FNSS if funding approved by Ministry.	2004	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
Upgrade lighting systems during retrofits	Ongoing/In Progress	50	% of retrofits (captured above) had lighting systems upgrades	Lighting retrofits in some buildings. Two buildings (RLA and GWC).are complete.	To complete JSC and continue our program in other district schools. Toad River School will have a complete light retrofit including Exit lights in the summer of 2009.	2006	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	64	% of retrofits (captured above) had control system upgrades or adjustments	None Taken.	None planned.	2002	No End Date (Continuous)
Install an on-site renewable energy demonstration project	Complete	0	% of retrofits (captured above) had on-site renewable energy components	None Taken.		2005	No End Date (Continuous)
IT power management							
Install power management software which shuts down computers outside of regular business hours	Complete	95	% of computers shut down automatically outside of regular business hours	Implementation of program.	Continue Program.	2009	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Complete	100	% of computers have auto-sleep settings applied	Continued program.	Continue Program.	2007	No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Ongoing/In Progress	15	% reduction in printers, copiers, and/or fax machines since start year indicated	Had copiers set up to have the capacity to scan and email.	removal of all fax machines - will maintain only one in the board office	2007	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	11	% of fridges are ENERGY STAR rated	One refrigerator was replaced.	Replacements will be made with Energy Star status.	2009	No End Date (Continuous)
Behaviour change program							
Ask staff to unplug electrical equipment or switch off power bars when not in use	In Development				Protocol/policy development	2010	2011
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress			We encourage the use of blinds, particularly when the weather turns warmer to assist with keeping the rooms cool.	Protocol/policy development	2008	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	In Development				Protocol/policy development	2010	2011
Other Stationary Fuel Combustion and Electricity Actions							
BC Hydro project at our rural school	Ongoing/In Progress			Individual home owned diesel powered generators have been replaced by more efficient diesel powered generators installed by B.C. Hydro.	Over time B.C. Hydro intends to displace the diesel power by renewable generated electricity. The displacement is estimated to be about 30%.	2009	No End Date (Continuous)
Solar Panels to offset B.C. Hydro costs at our highschool.	Ongoing/In Progress			Continue to keep snow off of the panels and ensure that power is being transferred on to the grid.	Continue Program.	2006	No End Date (Continuous)
District Energy Report and Asset Detail Report	Complete			A consultant was hired to complete a District Energy Report. As well, an Asset Detail Report was prepared by VFA Canada Corporation on behalf of the Ministry of Education.		2009	2009
Installation of 119 gallon hot water tank	Complete			A 119 gallon hot water tank was installed fueled by the heat exchanger associated with the existing boiler system.		2009	2009
Switch to electrical	Ongoing/In Progress			The hot water tank installed is switched to electrical power in the summer to save the cost of heating up the boilers.	Maintain Practice.	2009	No End Date (Continuous)
Supplies (Paper)							
Paper Type							

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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
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	15	% of total paper purchased contains 30% recycled content	Some of our schools are purchasing recycled paper.	Will evaluate and determine if appropriate/cost effective to encourage more of our sites to purchase recycled paper.	2009	No End Date (Continuous)
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	70	% of network printers or photocopiers are set to automatic double-sided	Set double side feature as default on photocopiers.	Continue with practice - investigate feasibility of double side feature for network printers.	2009	No End Date (Continuous)
Electronic media in place of paper							
Post materials online that were previously printed	Ongoing/In Progress			All school notices are sent electronically and put on the website when applicable.	Continue with practice.	2009	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Complete			Advised staff that all payroll information will be sent electronically.	Continue with practice.	2009	No End Date (Continuous)
Behaviour change program							
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress			Board meetings are paperless/other committee meetings are paperless.	Continue with practice.	2009	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress			Some schools use their scrap paper for art activities and for messages.	Continue with practice.	2008	No End Date (Continuous)
Other Paper Supplies Actions							
Use of online signatures for authorization	In Development				Will be establishing an online signature for authorization to pay invoices in the district.	2010	No End Date (Continuous)
Use of Visa Cards	Ongoing/In Progress			Visa card policy has been developed. Visa cards will be used to reduce the use paper through the reduction of the use of purchase orders.	Continue with practice.	2009	No End Date (Continuous)

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Actions to Reduce Provincial Emissions and Improve Sustainability

The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the *Greenhouse Gas Reduction Targets Act*. Public sector organizations can optionally use this section to report on actions that will help British Columbia meet its provincial greenhouse gas reduction targets, engage the public, and improve environmental sustainability across all aspects of their organization.

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
Business Travel						
Policy and budgeting						
Create a low-carbon travel policy or travel reduction goal	Ongoing/In Progress		Some travel accounts were reduced.	Development of travel policy.	2009	No End Date (Continuous)
Virtual meeting technology						
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress	3 % of computers have web-conferencing software installed	Elluminate was used for Info Tech 10 and 12 program delivery in Toad River. As well, it was used for staff development and Ministry meetings.	Continue to encourage organizations to provide an alternative delivery model, through technology, for meetings and conferences. As well, continue to encourage staff to use an alternative delivery model, through technology.	2009	No End Date (Continuous)
Behaviour change program						
Train staff in web-conferencing	Ongoing/In Progress	10 % of staff are trained web-conferencing	Some inservice has taken place.	Continue with training.	2009	No End Date (Continuous)
Train staff in video-conferencing or provide technical support for video-conferencing set-up	Ongoing/In Progress	100 % of staff are trained in video-conferencing or have access to technical support	Some training has taken place. Technical support is readily available.	Continue with training.	2009	No End Date (Continuous)
Education, Awareness, and Engagement						
Team-building						
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Ongoing/In Progress		Ongoing Green Committee work.	Ongoing Green Committee work.	2009	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	Ongoing/In Progress		Two Green Committee meetings were held. Staff have been assigned responsibilities in this area under their current mandate.	Continue to assign staff to work in these areas.	2009	No End Date (Continuous)
Client/public awareness/education						
Provide green tips on client/public website or in newsletters	In Development			We are hosting an Earth Day Celebration in April. We will be issuing green tips daily, on our all staff bulletin board.	2010	No End Date (Continuous)
Other Education, Awareness, and Engagement Actions						
Creation of Worm Farms	Ongoing/In Progress		Many classroom teachers introduced their students to worm farm composting.	Continuation of program.	2009	No End Date (Continuous)
Recycling programs	Ongoing/In Progress		Recycling programs include juice boxes, toner cartridges, cell phones and telephone books.	Continuation of program.	2008	No End Date (Continuous)
Paper Making	Complete		Students were taught how to turn newspaper into pulp to create recycled paper.		2009	2010
Planting of sunflower plants	Ongoing/In Progress		Sunflower plants will be planted to remind children that with the growth CO2 will be reduced.	Sunflowers will be planted.	2009	2010
Planting of trees	Ongoing/In Progress		Discussions have taken place regarding placement of trees at one of our elementary schools through a program called Energy in Action. The program is sponsored by an oil and gas company operating in the Fort Nelson area.	Planting of the trees.	2010	2010

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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
Watch caterpillars turn into butterflies.	Ongoing/In Progress		The Green Club at one of our elementary schools have had discussions with their sponsor teacher to purchase caterpillars to watch them turn into butterflies.	Purchase the caterpillars and document the stages as the caterpillars turn into butterflies.	2010	2010
Green Club Challenge	Complete		Green Club members at one of our elementary schools turned a shoebox into a Green Challenge draw box for their classroom. They created five challenges for students in their class to participate in. When students completed the green challenges they were able to put their name in the Green Challenge draw box. When the Green Club members brought their classroom boxes to Green Club they drew names and chose prizes for the winners.		2009	2009
Earth Day Challenge	Ongoing/In Progress		Planning has taken place to host an Earth Day Challenge on April 22, 2010.	An Earth Day Challenge will be hosted on April 22, 2010. A recyclable classroom competition will be included in the events as well as an art contest with the goal that the selected art contest drawings/paintings, based on the theme Reduce, Reuse, Recycle, will be reproduced for display on our maintenance fleet vehicles.	2010	2010
Other Sustainability Actions						
Waste reduction/diversion						
Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities	In Development			Host meetings with the municipality to encourage a community recycle program to deal with items such as computers, printers, faxes, etc.	2010	No End Date (Continuous)
Procurement (non-paper supplies)						
Incorporate minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.)	In Development			Research and development of a policy.	2010	2011
Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)	In Development			Research and development of a policy.	2011	2012
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress		Purchased green cleaning products and had supplier provide training on the use of these products.	Maintain green product usage.	2009	2010
Indoor air quality						
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Complete		We have a scent aware program in the district.		2006	No End Date (Continuous)
Commuting to and from home						
Provide secure bicycle storage	Complete		We have secure bike racks at each school location.		2009	2010