

# Board of Education of School District No. 27 (Cariboo-Chilcotin) 2009 Carbon Neutral Action Report

## Executive Summary

The Board of Education of School District No. 27 took a major step forward toward our goals of reducing greenhouse gas by the formation of our Environmental Stewardship Committee. The Committee will consist of all major stakeholders within the School District, trustees, senior management, District Parent Advisory Committee members (DPAC), teachers and the students who attend the schools we represent. This Committee will provide all groups an opportunity to exchange and share ideas that not only reduce greenhouse gases (GHG), but also produce more environmentally conscious and responsible students.



## Overviews

### Actions Taken to Reduce Greenhouse Gas Emissions in 2009

The School District aggressively upgraded many of the lighting systems and some mechanical systems within our various buildings to ensure our buildings would operate as efficiently as possible. In addition, the District also applied for, and received, grants to implement new technologies such as solar hot water heating to reduce GHG for hot water production. These systems will be installed and functional in 2010, helping us reduce the carbon credits required to become carbon neutral. The District also invested in technology that allows for web-conferencing to reduce our inter-District travel (for more details of specific actions refer to our Carbon Neutral Action Report).

### Plans to Continue Reducing Greenhouse Gas Emissions 2010 – 2012

To be Carbon Neutral in 2010, School District No. 27 looks forward to the continuation of finding efficiencies in our buildings and operations. We are also excited to be entering into an era of student and staff awareness that will result in a direct impact on our overall reduction of greenhouse gases now, and for the future. The formation of the School District “Environmental Stewardship Committee” ensures that the decisions made for today will also include a detailed investigation of the environmental impacts for those generations that follow.

Social responsibility is a large part of the educational system today. School District No. 27 believes that we all have a global social responsibility to share with the Government of British Columbia to become Carbon Neutral in 2010. This global view and leadership role we are taking now will allow for a brighter future for all, and produce students that think beyond the town, province, or country they live in and become stewards of the earth for generations to come.



*“Learning, Growing and Belonging Together”*

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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 <i>Greenhouse Gas Reduction Targets Act</i> .							
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
<b>Mobile Fuel Combustion (Fleet and other mobile equipment)</b>							
<b>Vehicle fuel efficiency</b>							
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	90	% of vehicles are fuel- efficient models	Four vehicles were purchased to replace older inefficient ones.	Continue to replace older inefficient vehicles with newer units.	2006	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	10	% of vehicles down-sized since start year indicated	New vehicles were purchased with "right-sizing" principles.	Continue the "Right-Sizing" principle for new vehicle purchases.	2006	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	Preventive maintenance procedures of fleet continued.	Continue with preventive maintenance procedures of fleet continued.	2000	No End Date (Continuous)
<b>Behaviour change program</b>							
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	In Development				Work with Environmental Stewardship committee to produce an anti-idling policy to present to the Board of Education.	2010	2012
Encourage carpooling in fleet vehicles	Ongoing/In Progress			All staff are encouraged to carpool in district vehicles where possible.	Work with district staff to encourage continued use of carpooling.	2008	No End Date (Continuous)
<b>Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)</b>							
<b>Planning/management</b>							
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	In Development				District would like to start implementing real time monitoring of buildings starting with largest facilities and fuel consumers first.	2010	2012
<b>Owned buildings</b>							
Establish energy performance baseline for owned buildings	In Development			Energy consumption was collected and compiled into master database for all District sites.	Analyze site data to determine most energy efficient buildings to set baselines and goals for other sites.	2010	No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	In Development				All new construction projects will be built to LEED Gold standard.	2009	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Ongoing/In Progress			Procedures currently in place to try to prevent any fugitive emissions from escaping.	Continue on with safe practices in connection with fugitive emissions release.	2008	No End Date (Continuous)
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	20	% of owned buildings have undergone energy retrofits since start year indicated	Retrofitted several buildings with more efficient lighting and HVAC systems.	Continue to identify sites requiring efficiency upgrades.	2006	No End Date (Continuous)
<b>Retrofitting owned buildings</b>							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	17	% of retrofits (captured above) had heating, cooling, and ventilation systems upgrades	Upgrade Nesika Elementary with a new efficient mechanical system.	Continue to identify and complete mechanical upgrades.	2005	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	67	% of retrofits (captured above) had lighting systems upgrades	Worked with BC Hydro's Powersmart program to upgrade lighting in buildings.	Continue working with BC Hydro to upgrade lighting systems.	2003	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	17	% of retrofits (captured above) had control system upgrades or adjustments	Worked with control contractor to ensure retrofits operate as efficiently as possible.	Continue to examine and re-commission HVAC control systems to operate as efficiently as possible.	2008	No End Date (Continuous)
Install an on-site renewable energy demonstration project	Ongoing/In Progress	32	% of retrofits (captured above) had on-site renewable energy components	Retrofit of two schools to include solar hot water heating systems was initiated.	Continue to examine and look for opportunities to increase renewable energy systems.	2009	No End Date (Continuous)
<b>IT power management</b>							
Implement server virtualization	Ongoing/In Progress	95	% of servers have been virtualized since start year indicated	Ongoing Virtualization - 95 % Complete	100% Virtualization where technically possible	2007	2011
Apply auto-sleep settings on computer monitors and CPUs	Complete	100	% of computers have auto-sleep settings applied				
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	In Development			Multifunction Printers are installed, but Users Reject removal of previous Printers		2006	
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Complete	100	% of devices have auto-sleep settings applied				
Replace computers with ENERGY STAR models during regular computer upgrades	Complete	100	% of computers are ENERGY STAR rated				
<b>Appliances and electronic devices</b>							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress	30	% of fridges are ENERGY STAR rated	All new appliances were purchased had the ENERGY STAR rating.			
Replace other appliances or electronic devices with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress			All new appliances were purchased had the ENERGY STAR rating.	All new appliances will be purchased with the ENERGY STAR rating.	2008	No End Date (Continuous)
Replace desk lamp incandescent bulbs with compact fluorescent (CFL) bulbs or source more efficient desk lamps for future purchases	Ongoing/In Progress			No incandescent bulbs being purchased.	All incandescent bulbs are being replaced with CFL bulbs. No new incandescent bulbs are being purchased.	2008	No End Date (Continuous)
<b>Behaviour change program</b>							
Promote hot water conservation	Ongoing/In Progress			All "green" cleaning products work with cold water, staff are encouraged to use only cold water for cleaning.		2006	No End Date (Continuous)
<b>Other Stationary Fuel Combustion and Electricity Actions</b>							
Identify Energy efficiency projects	Ongoing/In Progress			The school district Identified three major mechanical/electrical upgrade projects to help reduce the greenhouse gas (GHG) production. The district applied for various grants to help fund the projects.	The District is waiting on grant funding to be approved to start the three projects. The District will also continue to identify opportunities to save GHG's and apply for grants to help with funding.	2009	No End Date (Continuous)

**Supplies (Paper)**

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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
<b>Paper Type</b>							
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	80	% of total paper purchased contains 30% recycled content	Revision of purchasing policy to only purchase paper with 30% recycled content.	Continue purchasing 30% recycled paper.	2009	No End Date (Continuous)
<b>Printer/document settings</b>							
Switch networked printers and photocopiers to automatic double-sided	In Development			Research into computer policy options need to be completed (how it will be accomplished). User acceptance will be an issue.	Research into computer policy options.	2010	2012
<b>Electronic media in place of paper</b>							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Complete	100	% of staff workstations with software installed	SharePoint is installed, and ongoing user training needs to occur for greater implementation.	Ongoing Posting of Documents and User Training.		
Use electronic document library for filing common documents	Complete	100		SharePoint is installed, and necessary documents posted.	Ongoing Posting of Documents and User Training.		
Post materials online that were previously printed	Complete	100		SharePoint is installed, and necessary documents posted.	Ongoing Posting of Documents and User Training.		
Switch to an electronic payroll notification system in place of paper pay stubs	Complete	100		All staff receive electronic payroll notification.		2004	
<b>Behaviour change program</b>							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	5	% of staff currently have received collaborative software training	All staff have been provided access to the District SharePoint services.	Ongoing training and staff awareness of the power of collaborative software.	2008	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress			Trustees have access to all their documentation online.	Further Expansion will require training and specific targeted projects.		
Encourage re-use of scrap paper	In Development						

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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
<b>Business Travel</b>							
<b>Virtual meeting technology</b>							
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress			Where Necessary Elluminate and Communication Server software has been implemented.	Installation of Communication Server into More Sites, and setting up of Virtual Classrooms.	2009	No End Date (Continuous)
Make desktop web-cameras available to staff	Ongoing/In Progress			Where Necessary Elluminate and Communication Server software has been implemented.	Installation of Communication Server into More Sites, and setting up of Virtual Classrooms.	2009	No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Ongoing/In Progress			Where Necessary Communication Server software has been implemented.	Installation of Communication Server into more sites as necessary.	2009	No End Date (Continuous)
<b>Behaviour change program</b>							
Train staff in web-conferencing	Ongoing/In Progress	1	% of staff are trained web-conferencing	Those requiring skills provided training, or IT Staff deals with operation of Equipment.	Those requiring skills provided training, or IT Staff deals with operation of Equipment.	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	Those requiring skills provided training, or IT Staff deals with operation of Equipment.	Those requiring skills provided training, or IT Staff deals with operation of Equipment.	2009	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress			Where available, meetings are held virtually.	Increase the number of available meetings held virtually by expanding use of Communication Server.	2009	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress			All district staff are encouraged to carpool.	Continue encouragement of carpooling.	2008	No End Date (Continuous)
<b>Education, Awareness, and Engagement</b>							
<b>Team-building</b>							
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	In Development			School District formed a "Environmental Stewardship" committee to provide high level guidance to the District regarding "Green" efficiencies.	Get committee active and operational.	2010	2010
Provide resources and/or dedicated staff to support teams	In Development				Identify members for the Environmental Stewardship Committee and get the committee up and operating.	2010	2010
<b>Other Sustainability Actions</b>							
<b>Procurement (non-paper supplies)</b>							
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	In Development			All cleaning products are "green" and environmentally friendly.	Examine use of disposable garbage bags and trash bags.	2009	2011
<b>Indoor air quality</b>							
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Ongoing/In Progress			Individual sites have own guidelines regarding scent free policy		2008	No End Date (Continuous)