



SD72- Campbell River - 2010 Carbon Neutral Action Report

Executive Summary

In 2010, SD72 has continued to make progress towards our Carbon Neutral Commitment. We have revisited and refined policy, enhanced our focus groups, furthered partnerships and have grown school-wide initiatives on both the educational as well as the operational side of our organization that move us towards our goals. We continue to work with stakeholders across the district and have evolved a communications plan that clearly articulates our goals and progress in the area of sustainability.

As documented in our Strategic Energy Management Plan, School District No. 72 (Campbell River) has achieved significant energy savings through behavioural and technical/infrastructure initiatives. As a result, reportable greenhouse gas emissions in 2010 decreased by 7.9% compared to 2009.

2010 Greenhouse Gas Emissions

As reported in SMARTTool, total 2010 greenhouse gas (GHG) emissions for School District No. 72 (Campbell River) was 2652.2 tonnes CO₂(e).

Offsets Applied to become Carbon Neutral in 2010

To become carbon neutral for 2010, total emission offsets purchases were \$63,836.92 (incl HST). As required by section 5 of the Carbon Neutral Government Regulations, 372.3 tonnes CO₂(e) of emission resulting from the operation of school buses were reported as part of our greenhouse gas emissions profile in 2010. However, they were not offset as they are out-of-scope under section 4(2)(c) of the Carbon Neutral Government Regulation.

Emissions Reduction Activities

1. Actions Taken to Reduce Greenhouse Gas Emissions in 2010

In 2010, School District 72 has taken a number of actions towards reductions in Greenhouse Gas Emissions. Initiatives have included technical/infrastructure projects, community awareness and involvement, and student-lead projects (e.g. energy audits, school assemblies).

Local funded projects included the following:

- Four-school lighting upgrade project. Estimated energy savings is 196,500 KiloWatt-Hours per year for lighting upgrades in Discovery Passage Elementary, Ocean Grove Elementary, Pinecrest Elementary, and Sayward Elementary/Middle. Energy savings are related to electricity.
- Carihi lighting upgrade project. An upgrade to lighting in the Carihi academic building will save an estimated 127,500 KiloWatt-Hours per year. Energy savings are related to electricity
- Infrastructure Reductions. Following a condition assessment and review of infrastructure needs, seven surplus portables were sold. Expected utility cost avoidance is approximately \$11,000 per year, primarily in fossil fuels.
- Behaviour, Awareness and Engagement. The Energy Ambassadors and School Green Teams encouraged behavioural change through contests, assemblies, audits, campaigns at the school and district level. Community outreach included participation in the City of Campbell River's Task Force on Energy and Emissions, the City of Campbell River Sustainable Official Community Plan development, the Earth Day Film Festival, Earth Hour activities and Science World Green Game contest entries.
- Information Technology. In addition to ongoing maintenance, specific projects included desktop virtualization of 100 computers and replacement of 100 CRT monitors with LCD technology

- Engineering Studies. Engineering studies assist in the identification and prioritization of future projects. Engineering efforts are focused on mechanical systems upgrades (for inclusion in the District Capital Plan) and lighting upgrades.
- Demonstration Projects. Demonstration projects provide educational opportunities, raise energy conservation awareness, and assist in the development of emerging technologies. A Solar Hot Water system has been installed in the Timberline/NIC facility, with 100 percent of funding received.
- Development of Sustainability Guidelines. These guidelines include checklists, suggestions for waste management, energy conservation, and purchasing guidelines.
- Operational Changes.
 - In 2010, SD72 further developed our partnership in the BC Hydro Energy Managers Program. We held an Energy Management Assessment with BC Hydro and established short, medium and long-term goals for energy conservation in the district. The Energy Manager Program was approved by BC Hydro for continued funding. School District No. 72 was nominated for a BC Hydro PowerSmart Excellence Award in the K-12 sector.
 - Representatives were sent to the two-day workshop Small Steps and Big Leaps: Climate Action Mobilization, hosted by the Climate Action Secretariat. Follow up action items from this workshop included School District No. 72 organizing and hosting the Carbon Neutral Strategic Analysis Forum and improvements to the District composting and recycling programs.

2. Plans to Continue Reducing Greenhouse Gas Emissions 2011 – 2013

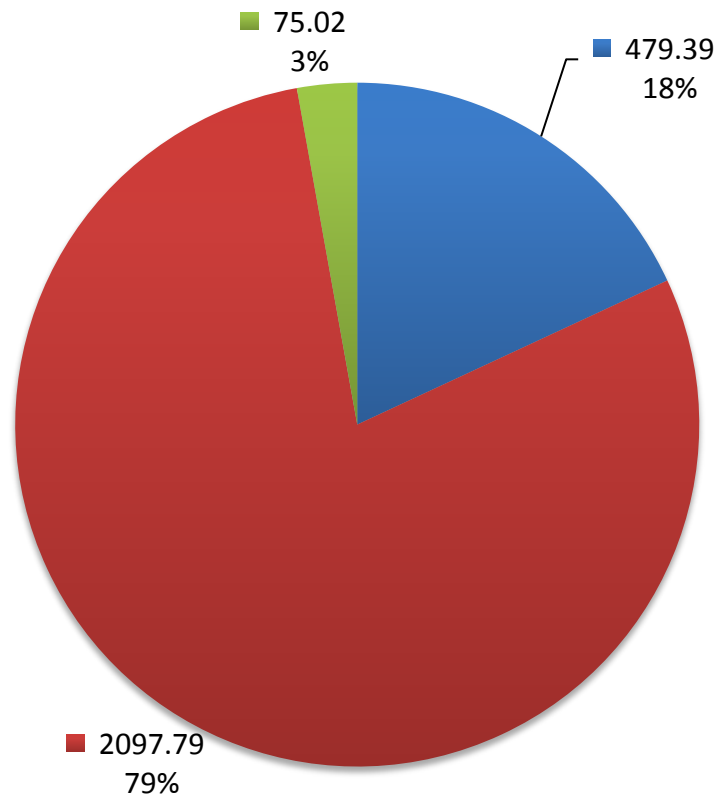
Ten projects have been identified for implementation in 2010/11. These projects reflect a blend of conservation activities (designed to achieve energy savings within an economical timeframe) and demonstration activities (designed to provide educational opportunities for students, raise energy conservation awareness, and introduce new technologies to the school district). The project with the largest potential greenhouse gas reduction is Phase One of the Timberline High School/North Island College Mechanical System Upgrade. PSECA approved grants for up to \$965,000, with anticipated savings of 290 tonnes CO₂(e). Other projects planned for 2011/12 include:

- Georgia Park Elementary Boiler Replacement, including conversion to condensing boiler technology
- Lighting upgrades to four schools, including conversion to energy efficient fixtures and adoption of lighting controls.
- Student Environmental Leadership Conference, to include topics such as water conservation, solar energy, sustainable development, food security, energy conservation, etc.

M. Peter Neale, BBA, CA
 Secretary-Treasurer
 School District No. 72 (Campbell River)

Board of Education School District 72

Greenhouse Gas Emissions by Source for the 2010 Calendar Year (tCO₂e*)



Total Emissions: 2652.2

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion and Electricity (Buildings)
- Supplies (Paper)

Offsets Applied to Become Carbon Neutral in 2010

Total offsets purchased: **2279**. Total offset investment: **\$56,975.00**. Emissions which do not require offsets: **373.2** **

*Tonnes of carbon dioxide equivalent (tCO₂e) is a standard unit of measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

** Under the *Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.

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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 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	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	50	% of vehicles are fuel- efficient models	Ministry approval received for replacement of one school bus.	Purchase school bus and dispose of older school bus. Continue to include vehicle replacements as part of Capital Plan	2010	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	Continue preventive maintenance program	Continue preventive maintenance program	2009	No End Date (Continuous)
Behaviour change program							
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Ongoing/In Progress	50	% of locations have anti-idling signage	All new drivers receive anti-idling program. Ordered signage and began installation of anti-idling signage	Complete installation of signage	2009	2011
Encourage carpooling in fleet vehicles	Ongoing/In Progress			Where appropriate.	continue as current.	2009	No End Date (Continuous)
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	Ongoing/In Progress			Bike to Work Week, Walk to School Days, Transit coupons for student use (during in-school programs).	Continue with current initiatives	2009	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Planning/management							
Enrol in a building energy benchmarking program (e.g., GREEN UP)	Ongoing/In Progress	100	% of buildings have energy performance benchmarks	Participation in Environmental Management Assessment w/ BChydro as part of related Energy Managers Program.	Continue energy performance benchmarking	2009	No End Date (Continuous)
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	In Development	0	% of buildings have a real time metering system installed	Additional training provide for Maintenance Staff July 2010 for enhanced DDC controls. Real-time metering considered but not feasible at this time.	Look for opportunities to provide further training as needed for DDC controls and funding opp's for real-time metering. Monitor BC Hydro installation of smart meters and evaluate for opportunities.	2010	2013
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	14	% of owned buildings have undergone energy retrofits since start year indicated	Completed passive solar heating system (Solar Wall) in Willow Point Elementary, Southgate computer desktop virtualization, Timberline Chiller Compressors decommissioned, Sayward Boiler Replacement (using condensing boilers), Replacement of 100 CRT Computer monitors at Carihi High School and Phoenix Middle School, Timberline passive solar hot water system installed	Georgia Park Boiler Replacement, Lighting upgrades (12 sites), Timberline Mechanical System Upgrade	2011	2013
Retrofitting owned buildings							
Install an on-site renewable energy demonstration project	Completed in 2010	0	% of retrofits since start year indicated had on-site renewable energy components	Completed installation of Passive Solar Water Unit at Timberline Secondary/North Island College November, 2010.		2010	2010
IT power management							
Implement server virtualization	Completed in 2010	100	% of servers have been virtualized since start year indicated	All district servers virtualized in 2010.		2008	2010

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Ongoing/In Progress			We continue to look for opportunities to centralize printing to school offices.	Continue to seek opportunities and funding for multi-use devices.	2007	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	100	% of computers are ENERGY STAR rated		As opportunities and funding perm.	2009	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			As part of school energy audits completes with school Green Teams at all sites.	Continue energy audits yearly that lead to change in behaviours	2009	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress			As part of school energy audits completes with school Green Teams at all sites.	Continue energy audits yearly that lead to change in behaviours	2009	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress			As part of school energy audits completes with school Green Teams at all sites.	Continue energy audits yearly that lead to change in behaviours	2009	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress			Encourage staff to limit light use after hours.	Continue energy audits yearly that lead to change in behaviours	2009	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Completed in 2010	100	% of facilities have stickers reminding occupants to turn off lights	Lights -out reminders posted in all buildings as part of school energy audits completed by Green Teams		2009	No End Date (Continuous)
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	In Development	5	% of total paper purchased contains 30% recycled content	We are considering the feasibility of asking all sites to switch to 40% recycled content for office paper use.	Consider budget implications of switching to 40% recycled content.	2010	No End Date (Continuous)
Electronic media in place of paper							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	In Development	0	% of staff workstations with software installed	We will be converting to SharePoint in September, 2011. Teachers are encouraging students to use collaborative software such as Google Docs	Conversion to MS Sharepoint	2011	2011
Use electronic document library for filing common documents	Ongoing/In Progress			Human Resources has converted to electronic filing systems	Continue conversion as resources allow	2010	2012
Post materials online that were previously printed	Ongoing/In Progress	100	HR, Newsletters, Curriculum Documents, Announcements, resources	Schools are converting to electronic newsletters only.	encourage schools and dept's to reduce post online through Sharepoint	2011	No End Date (Continuous)
Behaviour change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	In Development	0	% of staff currently have received collaborative software training	As described above.	implement Sharepoint Fall, 2011	2011	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress			Smartboards and Notebook Software is being used increasingly across the district. LCD projectors are available at all sites for paperless presentation of meeting materials.	implement Sharepoint Fall, 2011	2011	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress			Good one-side paper is converted into notepads at the district resource centre.	Going Paperless Contests/Garbage audits	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 12/31/10)	Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
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