



Reduce



Recycle



Reuse



Board of Education No. 61 (Greater Victoria)

2010 – Carbon Neutral Action Report

Executive Summary

The Board of Education No. 61 (Greater Victoria) has established a Board supported district wide Environmental Climate Change Policy that commits to integrating environmentally sustainable considerations into all of our business decisions and ensuring staff, students and parents are fully aware of our policy, actions and results. The School District presently ensures suppliers and clients are aware of our policy and encourages them to adopt sound sustainable environmental management practices and to review, report and continually strive to improve our environmental sustainability performance. Furthermore, the Board has established an Energy Savings Program that targets the reduction of green house gas emissions and includes lighting retrofits, fuel conversions, heating control upgrades, water conservation and building occupant education. The Board is actively upgrading heating plants and heating controls through its Annual Facilities Grant (AFG) as funding permits. Finally, the Board has initiated, supported and expanded its waste reduction program that has resulted in significant reduction in waste generated at 31 schools with a goal toward further expansion next year to include all schools.

Through these initiatives our Board has supported change that has resulted in annual utilities savings of \$250,000.00, has reduced our Carbon Footprint a further 8% this year and has engaged our staff and students in creating a more sustainable and improved learning environment.

As directed, the Board has captured all greenhouse gas emissions from the sources covered under the Greenhouse Gas Reduction Targets Act and, as reported in SMARTTool for the calendar year 2010, our School District's total greenhouse gas emissions have been calculated at 6095.94tonnes. Further, the Board has purchased offsets to obtain carbon neutrality as directed.

A handwritten signature in blue ink, appearing to read "George Ambeault".

George Ambeault
Secretary-Treasurer
Board of Education No. 61 (Greater Victoria)

2010 Greenhouse Gas Emissions

- Mobile Fuel Combustion (Fleet) and other mobile equipment = 214.1 tonnes of CO₂e
- Stationery Fuel Combustion and Electricity (Buildings) = 5634.19 tonnes of CO₂e
- Supplies (Paper) = 247.65 tonnes of CO₂e
- Fugitive Emissions = zero tonnes of CO₂e
- Total Emissions, Calendar Year 2010 = 6095.94 tonnes of CO₂e



Offsets Applied to Become Carbon Neutral in 2010

- Total offsets purchased = 6081.59 tonnes of CO₂e
- Total offsets investment (before taxes) = \$152,039.75 CDN
- Total Emissions which do not require offsets = 14.35 tonnes of BioCO₂ (As per Smarttool calculation: Building, Reported = 7.48 BioCO₂ + Mobile Combustion (Fleet) Litres = 6.87 BioCO₂)
BioCO₂ totaled: 14.35

Emission Reduction Activities for 2010:



- Installation of high efficiency condensing boilers at Rogers Elementary, Victoria West Elementary and Arbutus Middle schools
- Installation of solar walls at Rogers Elementary, Victoria West Elementary and Arbutus Middle schools
- Installation of new Energy Star windows at Lansdowne Middle, Macaulay Elementary, Marigold Elementary and Doncaster Elementary schools
- Installation of new heating controls at Macaulay Elementary, Marigold Elementary and Rockheights Middle schools
- Installation of low flush toilets at SJ Willis Continuing Educational Center and Lansdowne Middle schools
- Ongoing support in the development of school based student/staff energy conservation, sustainability initiatives and development of performance rewards
- Continue to offer energy and environmental educational opportunities for students
- Continue to expand staff and student awareness of energy and resource conservation
- Ongoing preparation of a Joint Waste Management tender in conjunction with other major public service groups in the Victoria area
- Implementation of a waste management program that supports both Provincial and local government's mandate by identifying and implementing best practice methods of recycling, composting and paper use reduction

Future initiatives planned to further reduce Greenhouse Gas Emissions:

- Continued focus on energy reduction through mechanical upgrading of heating, ventilation, heating control systems, window replacement, student/staff education and awareness training

Operational Changes

There have been no significant operational changes which would impact the emissions profile in the Greater Victoria School District over the 2010 calendar year i.e. increase or decrease in number of staff or buildings.



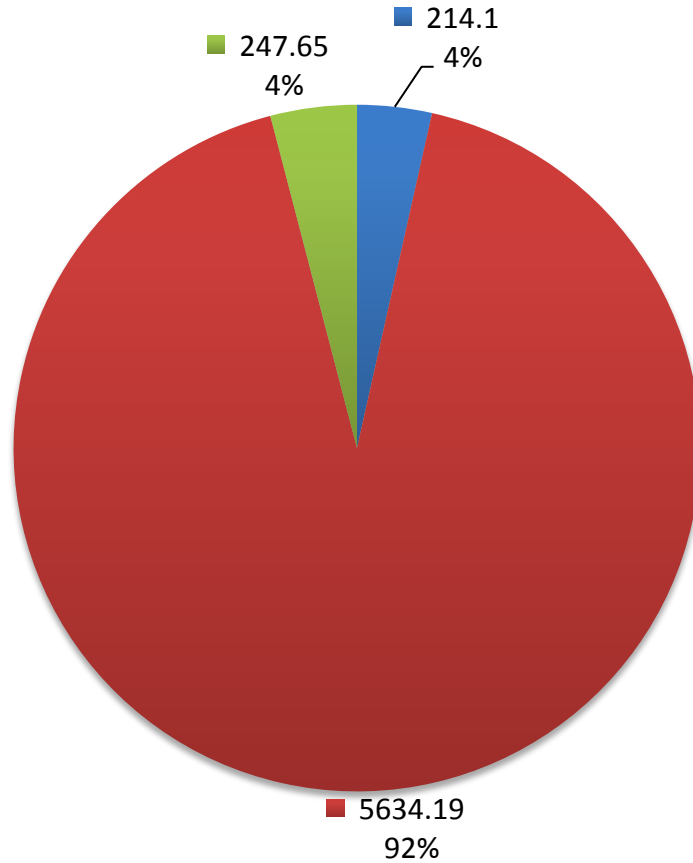
Plans to Continue Reducing Greenhouse Gas Emissions 2010 – 2013

The Board of Education No. 61 (Greater Victoria) remains committed to further reducing its carbon footprint and will continue to support the District's Energy Management Program through the implementation of energy efficiency upgrades to our Facilities such as the installation of new heating controls, heating plant upgrades, lighting upgrades and window replacements. The new Technical wing addition to Victoria High School (opening September 2011) and the planned replacement of Oak Bay Senior Secondary School will also contribute to a reduced carbon footprint. In addition, ongoing educational awareness campaigns for staff and students will continue.

- The Board of Education No. 61 (Greater Victoria) has a link for Green Initiatives on the School District Website: <http://www.sd61.bc.ca/green/default.aspx>



Board of Education #61 Greater Victoria
Greenhouse Gas Emissions by Source
for the 2010 Calendar Year (tCO₂e*)



Total Emissions: 6095.94

- 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: **6081.59**. Total offset investment: **\$152,039.75**. Emissions which do not require offsets: **14.35** **

*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		No new vehicles.	Will replace/upgrade three vehicles with more energy efficient vehicles as funding permits.	2009	No End Date (Continuous)	
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress		No new vehicles.	Will replace/upgrade three vehicles with more energy efficient vehicles as funding permits.	2009	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	Regular maintenance and program in place.	Continuation of regular maintenance program.	2007	No End Date (Continuous)
Replace small maintenance vehicles with more fuel-efficient models	Ongoing/In Progress		As funding permits.	As funding permits.	2007	No End Date (Continuous)	
Behaviour change program							
Provide fleet driver training to reduce fuel use	Ongoing/In Progress		Driver training program provided.	Further driver training planned.	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		Proposed policy being reviewed. Some schools have Anti/Idling programs in place. Drivers trained not to allow vehicles to idle.	Ongoing awareness training.	2009	No End Date (Continuous)	
Encourage carpooling in fleet vehicles	Ongoing/In Progress		Staff advised to 'buddy up' when working on the same job.	Ongoing awareness training.	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		Installed at 2 schools. Pulse metering installed at two schools, new DDC Controls installed at three schools.	Three major heating control upgrades planned.	2010	No End Date (Continuous)	
Owned buildings							
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress		Design underway for replacement school at Leed Gold level.	Construct new school when funding approved.	2009	No End Date (Continuous)	
Incorporate integrated design process into new construction or during renovations of owned buildings	Ongoing/In Progress		Work closely with architects to ensure design process reflects integration.	Process will be followed for two major projects and/or construction.	2009	No End Date (Continuous)	
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress		High efficiency boilers installed at three schools. Three solar walls installed.	Two new high efficiency boilers to be installed.	2009	No End Date (Continuous)	
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress		New DDC Controls added at three schools.	Two major mechanical upgrades planned.	2009	No End Date (Continuous)	
Upgrade lighting systems during retrofits	Completed in 2010		Lighting retrofit of all schools is now complete.		2003	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
Upgrade/adjust control systems during retrofits	Ongoing/In Progress			Upgrades at three schools has been completed.	Two upgrades scheduled.	2009	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress			Window replacement with Energy Star windows at three schools.	Three more window retrofits planned.	2007	No End Date (Continuous)
Install an on-site renewable energy demonstration project	Completed in 2010			Two Roof Top Solar Energy Systems installed.		2009	2010
IT power management							
Install power management software which shuts down computers outside of regular business hours	Completed in 2010	100	% of computers shut down automatically outside of regular business hours	100% of computers shut down automatically.		2008	2010
Implement server virtualization	Completed in 2010			Not all servers can be virtualized, those that can, have been completed.		2008	2010
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Ongoing/In Progress			All individual copiers and faxes in main offices have been replaced with multi-function devices.	Continue to educate and eliminate stand alone machines from buildings.	2008	No End Date (Continuous)
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Completed in 2010			100% have been completed on all multi-function devices.		2008	2010
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress			100% for new computers. Almost all used computers will be Energy Star compliant.	100% for new computers. Almost all used computers will be Energy Star compliant.	2008	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 purchases are Energy Star models.	Ongoing replacement with more energy efficient equipment.	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 purchases are Energy Star models.	Ongoing replacement with more energy efficient equipment.	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			Reminder to staff.	Ongoing education.	2008	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress	100	% District practice to close all blinds at end of day.	Reminder to staff.	Continue program.	2009	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			Reminder to staff.	Continue program.	2009	No End Date (Continuous)
Promote hot water conservation	Ongoing/In Progress			Have replaced large tanks with smaller independent tanks requiring less water to be heated. Further evaluation of tank replacement combined with staff education.	Possible replacement of more tanks and ongoing education.	2008	No End Date (Continuous)
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Ongoing/In Progress			Purchase of 40% recycled paper increased by 11%.	Moving closer to purchase of 100% recycled paper only.	2009	No End Date (Continuous)
Purchase 100% post-consumer recycled paper	Ongoing/In Progress			Purchase of 100% recycled paper increased by 7%.	Goal is to convert to 100% recycled paper use only.	2009	2013

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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
Printer/document settings						
Switch networked printers and photocopiers to automatic double-sided	Completed in 2010		Recommended and adopted as School Board practice.	Continue practice.	2009	2010
Electronic media in place of paper						
Post materials online that were previously printed	Completed in 2010		All schools now involved e.g. online school newsletters.		2009	2010
Behaviour change program						
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress		Using smart boards or projectors instead of handouts.	Continue practice.	2007	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress		Students return handouts for reuse and reuse of envelopes.	Continue practice.	2007	No End Date (Continuous)
Other Paper Supplies Actions						
Students print on both sides of paper.	Ongoing/In Progress		Continued practice.	Continued practice.	2008	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
Education, Awareness, and Engagement							
Team-building							
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Ongoing/In Progress	58	% of schools have green teams. (31 schools)	Eleven additional schools created green teams and joined the waste management program.	Have remaining teams join program.	2009	2013
Provide resources and/or dedicated staff to support teams	Ongoing/In Progress			Resources available through District website: http://www.sd61.bc.ca/green/default.aspx	Continue to expand and shape information.	2009	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	Ongoing/In Progress	10	% Annual Forum to educate and update.	Forum held with all schools.	Forum planned February 2011.	2009	No End Date (Continuous)
Awards/Recognition							
Establish a sustainability/green awards or recognition program	Ongoing/In Progress	10	% Board recognition of individual teams.	Invited to share their experiences, ongoing support and recognition.	Recognition at Forum and future Board meetings.	2010	No End Date (Continuous)
Staff Professional Development							
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress			Staff are encouraged to attend where possible.	Ongoing support.	2008	No End Date (Continuous)
Staff awareness/education							
Provide education to staff about the science of climate change	Ongoing/In Progress			District Website and Forum available. Website has been expanded: http://www.sd61.bc.ca/green/default.aspx	Further expansion of website.	2009	No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress			District Website and Forum available. Website has been expanded: http://www.sd61.bc.ca/green/default.aspx	Further expansion of website.	2009	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress			District Website and Forum available. Website expanded and notices to staff.	Ongoing.	2009	No End Date (Continuous)
Client/public awareness/education							
Provide green tips on client/public website or in newsletters	Ongoing/In Progress			Tips provided on District green website. Continued support for and updating of Green website.	Further expansion of website.	2009	No End Date (Continuous)
Other Sustainability Actions							
Water conservation							
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress	25	% Schools already converted.	Continual expansion of program.	Further expansion planned.	2007	No End Date (Continuous)
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	Ongoing/In Progress	2	% of schools have a rain garden installed.	No further expansion planned at this time.	No further expansion planned at this time.	2008	No End Date (Continuous)
Waste reduction/diversion							
Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities	Ongoing/In Progress	65	% reduction of waste going to landfill.	Composting/waste reduction programs expanded to 31 schools.	Further expansion planned.	2008	No End Date (Continuous)

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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
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress			Schools sort on site and recycled material is picked up separately. Program expanded.	Further expansion planned.	2008	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.)	Ongoing/In Progress			Adherence to policy. Purchasing Policy in place.	Further expansion planned.	2008	No End Date (Continuous)
Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)	Ongoing/In Progress			Adherence to policy. Purchasing Policy in place.	Further expansion planned.	2008	No End Date (Continuous)
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Completed in 2010	100	Tender issued for green cleaning products tested and meeting ECO-Logo implemented June 30, 2009. 100% Custodial green cleaning products being used. Bio Degradable Garbage bags.	Adherence to policy.	Completed.	2009	2010
Building construction, renovation, and leasing							
Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities	Ongoing/In Progress	2	% Provision made at schools under renovation.	Two schools renovated and material salvaged.	Two more schools to be renovated/building deconstructed with material salvaged.	2009	2013
Indoor air quality							
Incorporate low volatile organic compounds (VOCs) standards into procurement policy for products such as paints, carpets, and furniture	Completed in 2010	100	% use of low VOC products, District Practice.	Adherence to policy.	Ongoing adherence to policy to use low VOC products.	2009	2010
Commuting to and from home							
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress			Many staff and students commute by bicycle or on foot. Encouragement for healthy choices.	Ongoing encouragement.	2008	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Ongoing/In Progress			When renovating, shower facilities are included. Provision made at two newly renovated schools.	Expand program at one school.	2009	2012
Provide secure bicycle storage	Ongoing/In Progress			Bike racks at majority of schools. District has worked with schools to provide additional bike storage.	Continued support.	2009	No End Date (Continuous)