The Board of Education of School District #28 Quesnel
2010 Carbon Neutral Action Report

Executive Summary

The Board of Education continued work on the development of a strategic plan regarding the requirements of the Greenhouse Gas Reduction Targets Act and carbon neutrality. In order to prioritize where the Board will focus its resources in relation to this act - beyond the mere purchasing carbon offsets, it was necessary to identify where we are with respect to emissions. This year, with the introduction of SMARTtool reporting, the emission benchmarks have been established (see below).

The Climate Action Committee continued to meet regularly to develop our environmental sustainability policy and identify specific objectives related to conserving energy and natural resources, while exercising sound financial management. The Board believes that all education partners will play a key role in the accomplishment of this initiative.

2010 Greenhouse Gas Emissions

By Source:

- Stationary Fuel Combustion and Electricity (Buildings)   1497.82 (62%)

- Mobile Fuel Combustion (Fleet and other mobile equipment)   843.25 (35%)

- Supplies (Paper)   64.07 (3%)

Offsets Applied to Become Carbon Neutral in 2010

In order to become carbon neutral for 2010 the Board of Education purchased at total of 1656.87 offsets for a total offset Investment of $41,422.

As required by section 5 of the Carbon Neutral Government Regulations, 748.27 tonnes CO2e of emissions 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.

Overview

Actions Taken to Reduce Greenhouse Gas Emissions in 2010

- The Board of Education replaced T12 bulbs with T8 bulbs at three of our elementary schools and the District office to reduce energy usage. Electronic ballasts work best with T8 bulbs for maximum energy saving. The energy effectiveness of the T8 bulb is due to being better able to convert incoming electricity to the proper amount needed to power the bulbs leading to less wasted energy.

- Upgraded the building insulation, specifically windows in two (2) of our Elementary Schools.

Operational Changes in 2010

Plans to Continue Reducing Greenhouse Gas Emissions 2010 – 2012

The Board of Education plans to:

1. Replace the antiquated HVAC system at Correlieu Secondary School with a new energy efficient system.

2. Launch efforts to reduce hydro usage in facilities by focusing on lighting initiatives.

3. Continuing purchasing Energy Star appliances and computers when replacing units.

4. Continue to remove stand-alone printers, copiers, and/or fax machines and install multi-functional devices.

5. Work with all locations to determine current efforts towards carbon neutrality.

Further, it is expected that the Climate Action Committee will submit to The Board of Education a set of focused recommendations and those recommendations will begin to be implemented in the above timeframe.
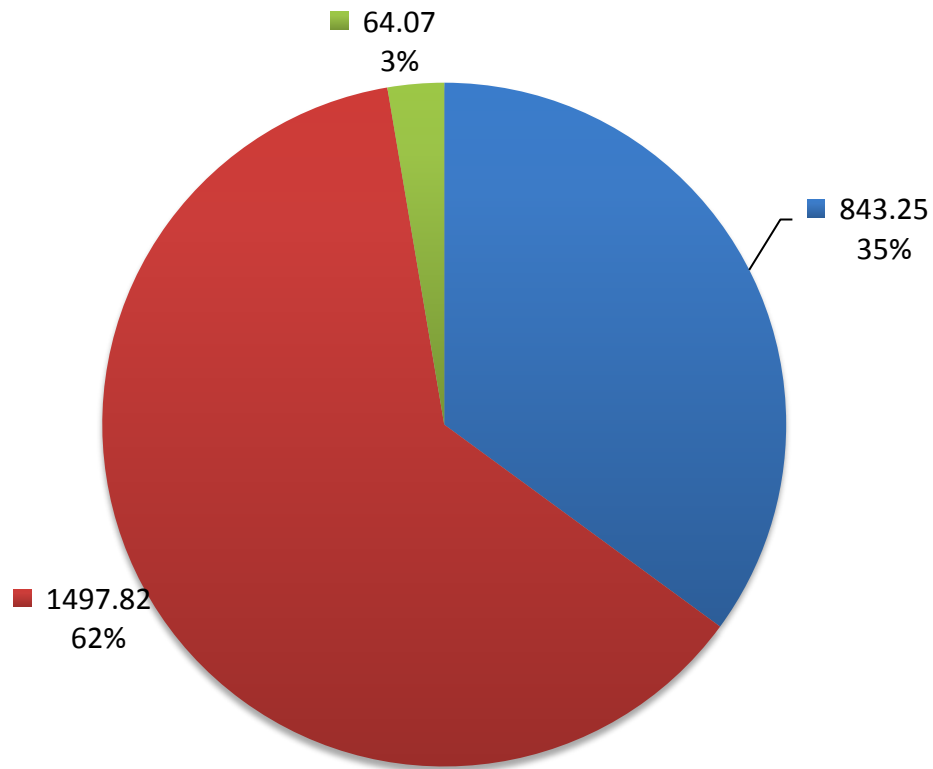
Respectfully submitted,

_____
Sue-Ellen Miller, Superintendent of Schools (CEO)

_____
Teri Stoneman, Secretary-Treasurer

The Board of Education of School District #28 Quesnel
Greenhouse Gas Emissions by Source
for the 2010 Calendar Year (tCO$_2$e*)

■ 64.07
3%

■ 843.25
35%

■ 1497.82
62%

Total Emissions: 2405.14

■ 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: **1656.87**. Total offset investment: $**41,421.75**. Emissions which do not require offsets: **748.27** **

*Tonnes of carbon dioxide equivalent (tCO$_2$e) 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	10	% of vehicles are fuel- efficient models	None	Future replacements will be fuel-efficient	2008	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	None	Sell excess vehicles in fleet as staffing downsizes	2008	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	Fleet vehicles are serviced every 5,000 kilometers	Continue regular servicing of fleet vehicles	1998	No End Date (Continuous)
Behaviour change program							
Provide fleet driver training to reduce fuel use	Completed in 2010	100	% of current drivers are trained	Hired a consultant to train entire bus driving workforce	Offer another session in 2013	2007	No End Date (Continuous)
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Completed in 2010	100	% of schools have signage and compliance	Completed signage at all school district facilities	Monitor signage to ensure visability and adherance	2007	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress	20	% of maintenance staff carpool when applicable	When projects involve many trades or more than one manpower, staff will carpool to the project	Continue to carpool when feasible for project work	2005	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	81	% of buildings have a real time metering system installed	Upgraded the equipment at the Bus Garage	We will consider replacing systems/equipment at Correlieu Secondary School.	2004	No End Date (Continuous)
Owned buildings							
Establish energy performance baseline for owned buildings	In Development	95	% of owned buildings have an established energy performance baseline	Created database with 3 year average usage	Continue to monitor trends	2010	No End Date (Continuous)
Register for performance labelling/certification for commercial interiors of owned buildings (e.g., LEED CI)	Ongoing/In Progress	2	% of commercial interiors in owned buildings have labelling	None	Ongoing replacement when retrofitting building space	2008	No End Date (Continuous)
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	80	% of owned buildings have undergone energy retrofits since start year indicated	Without major capital funding support we are unable to complete any additional energy retrofits	We will continue to request major capital funding to upgrade Maple Drive Junior School and Correlieu Senior Secondary	2000	No End Date (Continuous)
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	100	% of retrofits since start year indicated had heating, cooling, and ventilation systems upgrades	Without Captial Funding Support unable to complete any additional energy retrofits	We will continue to request capital funding to upgrade Maple Drive Junior School and Correlieu Senior Secondary	2000	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
Upgrade lighting systems during retrofits	Completed in 2010	100	% of retrofits since start year indicated had lighting systems upgrades	We did T12 to T8 upgrades at Parkland, the District Office, Lakeview and Red Bluff Schools.	No further plans to date	2007	2010
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	81	% of retrofits since start year indicated had control system upgrades or adjustments	Replaced as HVAC retrofits were completed.	Continue as funding allows	1998	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	70	% of retrofits since start year indicated had insulation improvements	We completed Kersley and Parkland Elementary Schools	Roofing insulation upgraded as roofing replacement occurs.	2003	No End Date (Continuous)
Install an on-site renewable energy demonstration project	Ongoing/In Progress	5	% of retrofits since start year indicated had on-site renewable energy components	Currently none underway	Solar Panel Wall installation at Correlieu Senior Secondary	2008	No End Date (Continuous)
IT power management							
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	90	% of computers shut down automatically outside of regular business hours	None specifically	Continue to monitor systems and resolve problems	2007	No End Date (Continuous)
Implement server virtualization	Ongoing/In Progress	10	% of servers have been virtualized since start year indicated	None specifically	Watch for further opportunities	2008	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	90	% of computers have auto-sleep settings applied	None specifically	Continue to monitor systems and resolve problems	2008	No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Ongoing/In Progress	5	% reduction in printers, copiers, and/or fax machines since start year indicated	Set up all new copiers to function as fax machines an forward to email.	Continue to implement as new copiers are integrated into fleet	2008	2012
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Ongoing/In Progress	90	% of devices have auto-sleep settings applied	None specifically	Continue to implement as new equipment is integrated into fleet	2007	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	90	% of computers are ENERGY STAR rated	Purchased only ENERGY STAR models as computer upgrades	Continue to purchase only energy star rated computers	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	65	% of fridges are ENERGY STAR rated	Continue to replace old fridges with new energy star rated fridges	Ongoing replacement with new energy star rated fridges	1998	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	65	% of other appliance are ENERGY STAR rated	Continue to replace old appliances with new energy star rated appliances	Ongoing replacement of old appliances with new energy star rated appliances	1998	No End Date (Continuous)
Behaviour change program							
Provide reminders for turning off lights (e.g., signs, stickers, messages)	In Development				Launch awareness campaign	2011	No End Date (Continuous)
Supplies (Paper)							
Paper Type							

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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
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	34	% of total paper purchased contains 30% recycled content	34% of paper purchased had 40% recycled content.	Continue resourcing options/alternatives of recycled paper	2010	No End Date (Continuous)
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Completed in 2010	100	% of network printers or photocopiers are set to automatic double-sided	Attended all district locations to set printers/multifunctional devices to default double-sided printing	Ensuring all new purchases are configured with default double-sided printing	2010	No End Date (Continuous)
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	Ongoing/In Progress	50	% of network printers have 'print and hold' settings applied	Established standard instructions to set up 'print and hold' settings to networked multifunctional devices.	Continue to communicate standard instructions and begin change behaviour pattern	2010	No End Date (Continuous)
Electronic media in place of paper							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	In Development				Begin evaluating collaboration software	2011	No End Date (Continuous)
Use electronic document library for filing common documents	Ongoing/In Progress	50	% of staff using shared folders	Shared folders created at each worksite to enable file sharing	Continue communicating and encouraging staff to utilize this functionality	2009	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress	60	% of Board of Education materials posted online	Posting of public financial reports, class size reports, executive compensation reports, etc. all available online	Continue utilizing the web to post online documentation	2008	No End Date (Continuous)
Behaviour change program							
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress	10	% of meetings held are paperless meetings	Introduced the concept of paperless meetings	Ongoing education and communication regarding the importance of not always requiring printed materials/presentations	2010	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress	10	% of schools re-use scrap paper	Some scrap paper being reused	Encourage use by all staff	2000	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
Business Travel							
Virtual meeting technology							
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Completed in 2010	100	% of computers have web-conferencing software installed	Not applicable as Web conferencing software does not need to be installed as it is browser based.		2005	No End Date (Continuous)
Behaviour change program							
Train staff in web-conferencing	Ongoing/In Progress	13	% of staff are trained web-conferencing	Provide training as required.			
Train staff in video-conferencing or provide technical support for video-conferencing set-up	Ongoing/In Progress	2	% of staff are trained in video-conferencing or have access to technical support				
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress	2	% of staff are trained in video-conferencing or have access to technical support				
Encourage carpooling to meetings	Ongoing/In Progress	5	% of staff carpool to meetings or maintenance staff carpool to job site				
Education, Awareness, and Engagement							
Team-building							
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Ongoing/In Progress			The Climate Action Committee was established in March 2010 with 13 members and has executive endorsement	Develop policy and identify specific objectives to create education, awaremenss and engagement	2010	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	Ongoing/In Progress			Climate Action Committee has representatives from all stakeholder groups to support the team	Support climate actions initiatives and create small easy steps to sustainability	2010	No End Date (Continuous)
Awards/Recognition							
Establish a sustainability/green awards or recognition program	Ongoing/In Progress	7	% GREEN and JADE awards project status	Kersley Elementary School classes have completed over 250 environmental projects, succeeding in being designated JADE status	Working towards 500 environmental projects to achieve the EMERALD Badge	2006	2012
Staff Professional Development							
Include green options in employee performance measurement system	In Development						
Staff awareness/education							
Provide education to staff about the science of climate change	In Development				Articles on Climate Change Literacy will be provide in the District's weekly e-newsletter Update 28.	2011	No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress			Continue this practice	Our goal is to partner with BC Hydro to work on Power Smart projects.	2011	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
Provide green tips on staff website or in newsletters	In Development				Green tips will be provided in all Schools monthly newsletters and weekly in the District's e-newsletter.	2011	No End Date (Continuous)
Provide sustainability education during new staff orientation	In Development				Environmental Sustainability Policy 702 and the district's green initiatives will be reviewed during new staff orientation.	2011	No End Date (Continuous)
Client/public awareness/education							
Provide education to clients/public about the science of climate change	Ongoing/In Progress	7	% of households with green actions progress report	Students receive lesson on climate change and sustainability. Learning resources are available in the library.			
Provide education to clients/public about the conservation of water, energy, and raw materials	Ongoing/In Progress	7	% of households with green actions progress report	Students practice conservation daily by turning out lights when they leave a room. Signs are posted above light switches as a reminder to turn lights out.			
Provide green tips on client/public website or in newsletters	In Development	7	% of households with green actions progress report		Articles on Climate Change Literacy will be provide in the District's weekly e-newsletter Update 28.	2011	No End Date (Continuous)
Other Education, Awareness, and Engagement Actions							
Recycling Programs - paper/cardboard/refundable containers/plastic/glass	In Development	85	% of our Schools or Department Buildings are engaged in Recycling Programs	Partnered with a recycling company to assist with sorting and hauling to recycling facilities	Add more facilities as services are required	2010	No End Date (Continuous)

Other Sustainability Actions

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
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	15	% of facilities participating	Three beta facilities have been set up with recycling service pickup to reduce and divert waste	Monitor results of beta facilities and introduce additional facilities as outcomes improve	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.)	Ongoing/In Progress	10	% of consumable non-paper supplies incorporate recycled content	Introduced purchasing practices that incorporate recycled content and continue to recharge toner cartridges	Continue to add additional consumable supplies that incorporate recycled content	2004	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	40	% of facilities participating	Where floor replacement was required, replacement of carpets with linoleum flooring which reduces cleaning with chemicals, less dust accumulation and longer life span of the floors	Continue this practice	1995	No End Date (Continuous)
Building construction, renovation, and leasing							
Incorporate lifecycle costing into new construction or renovations	In Development			Part of our capital planning process and included in PIR's in 2009	All facilities will undergo lifecycle costing analysis in new constructin and renovations in the future	2009	No End Date (Continuous)
Indoor air quality							
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Ongoing/In Progress	6	% of our facilities is scent-free	No additional facilities added	Continue to introduce scent-free buildings as demand increases	2000	No End Date (Continuous)