



The Board of Education of School District #28 Quesnel

2011 Carbon Neutral Action Report

Executive Summary

The Board of Education passed Policy #702 – Environmental Sustainability (<http://www.sd28.bc.ca/board/policies/contents.htm>), as its firm commitment to environmental sustainability. The Board recognizes the leadership role that the district assumes with our students, employees, functional operations, and the community in its broadest form regarding this policy.

In addition, the Board purchased software designed to create and deliver “paperless” meetings. The software offers paperless agendas, attachments, and minutes for all public, in-camera and standing committees of the Board. These documents are available at <https://bc28.civicweb.net/Documents/DocumentList.aspx>

The Climate Action Committee continued to meet on a less regular schedule due to job action, to identify specific objectives related to environmental sustainability projects. The Board allocated a small budget to introduce and accomplish a small number of school-based green initiatives.

2011 Greenhouse Gas Emissions

By Source:

- | | |
|---|--------------|
| • Stationary Fuel Combustion and Electricity (Buildings) | 1473 (61.0%) |
| • Mobile Fuel Combustion (Fleet and other mobile equipment) | 885 (36.7%) |
| • Supplies (Paper) | 55 (2.3%) |

Offsets Applied to Become Carbon Neutral in 2011

In order to become carbon neutral for 2011 the Board of Education purchased at total of 1,675 offsets for a total offset investment of \$ 41,875. Further, School District #28 Quesnel over-reported 40 tonnes of emissions in 2010, due to meter irregularities at the building source.

As required by section 5 of the Carbon Neutral Government Regulations, 738 tonnes CO₂e of emissions resulting from the operation of school buses were reported as part of our greenhouse gas emissions profile in 2011. 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 2011

- ◆ The Board of Education introduced Policy #702 – Environmental Sustainability. This policy recognizes the importance of the environment in building a health and sustainable future. The Board is committed to environmental sustainability and acknowledges the influence that the district has on student and employee behaviours, district operations, the supply chain and greater community.
- ◆ Replaced the antiquated HVAC system at Correlieu Secondary School with a new energy efficient system that included a **solar wall panel**. This is the first solar panel the district has installed and it includes a web-based software component that will allow teachers and students to integrate this technology into the classroom. The teaching component will not be in operation until 2012.
- ◆ The district implemented a “**Green Tips**” section in our weekly newsletter. The section is dedicated to providing simple advice that contributes to environmental sustainability.
- ◆ The district created and installed a “**water filling station**” at Correlieu Secondary School for students to fill reusable water bottles, thereby reducing the use of purchased plastic water bottles.

Operational Changes in 2011

Plans to Continue Reducing Greenhouse Gas Emissions 2012 – 2014

The Board of Education plans to:

1. Launch efforts to reduce hydro usage in facilities by focusing on reducing usage of hydro and natural gas. We will use benchmark information from previous years to establish targets and develop a participative sharing of savings methodology to encourage involvement.
2. Continuing purchasing Energy Star appliances and computers when replacing units.
3. Continue to remove stand-alone printers, copiers, and/or fax machines and install multi-functional devices.

Operational Changes in 2011 (cont'd)

Plans to Continue Reducing Greenhouse Gas Emissions 2012 – 2014

The Board of Education plans to: (cont'd)

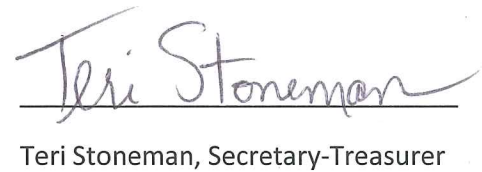
4. Work with all locations to determine current efforts towards carbon neutrality.

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



Teri Stoneman, Secretary-Treasurer



The Board of Education of School District #28 Quesnel - 2011 Carbon Neutral Action Report

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 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	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 are expected to 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 organization "right-sizes" staffing compliment	2008	No End Date (Continuous)
Perform regular fleet maintenance specifically to improve fuel-efficiency	Ongoing/In Progress	100	% of vehicles are subject to regular maintenance for fuel efficiency	Fleet vehicles are serviced regularly at every 5,000 kilometres	Continue with our preventative regular fleet servicing of vehicles	1998	No End Date (Continuous)
Behaviour change program							
Encourage carpooling in fleet vehicles	Ongoing/In Progress	20	% of maintenance staff carpool when applicable	When projects involve many trade disciplines or more than single manpower, staff will carpool to the project worksite	Continue to carpool to job sites 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	90	% of buildings have a real time metering system installed	Upgraded the equipment at Correlieu Senior Secondary School	We will consider replacing one additional system as dollars permit	2004	No End Date (Continuous)
Owned buildings							
Establish energy performance baseline for owned buildings	Ongoing/In Progress	95	% of owned buildings have an established energy performance baseline	Monitor trends utilizing the database with 3 year average usage information	Develop targets to reduce energy consumption	2010	No End Date (Continuous)
Register for performance labelling/certification for operations and maintenance of owned buildings (e.g., LEED EB:O&M)	Ongoing/In Progress	2	% of owned buildings have operations and maintenance labelling/certification	None	Ongoing replacement when retrofitting building space	2008	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Ongoing/In Progress	5	% of our air conditioning incorporate a refrigerant	The addition of Air conditioning server in our Board Office server room	None	2009	No End Date (Continuous)
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	85	% of owned buildings have undergone energy retrofits since start year indicated	Installed SOLAR wall at Correlieu Secondary School	We will continue to complete energy retrofits as funding becomes available	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	None	We will continue to request capital funding to upgrade Maple Drive Junior School and Correlieu Senior Secondary	2000	No End Date (Continuous)

The Board of Education of School District #28 Quesnel - 2011 Carbon Neutral Action Report

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Upgrade lighting systems during retrofits	Completed in 2011	100	% of retrofits since start year indicated had lighting systems upgrades	We completed a "light switching" modification project	No further plans currently	2007	2011
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	90	% of retrofits since start year indicated had control system upgrades or adjustments	Replaced as we completed HVAC retrofits	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	None	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	Solar Panel Wall installation at Correlieu Senior Secondary School	Student web-based monitoring system to be integrated to Earth Science 11 Classroom teaching	2008	No End Date (Continuous)
IT power management							
Install power management software which shuts down computers outside of regular business hours	Completed in 2011	98	% of computers shut down automatically outside of regular business hours	All software is now installed on those computers that fit the application		2005	2011
Implement server virtualization	Ongoing/In Progress	0	% of servers have been virtualized since start year indicated	None	Continue to virtualize where feasible	2005	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Completed in 2011	95	% of computers have auto-sleep settings applied	All software is now installed on those computers that fit the application		2005	2011
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	As printers fail, moved paper traffic to multi-functional devices	Continue to remove standalone printers where feasible	2009	No End Date (Continuous)
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	As computers upgraded or serviced, the auto-sleep setting is applied	Continue to set auto-sleep setting where possible	2005	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Completed in 2011	95	% of computers are ENERGY STAR rated	Replaced the last of the non ENERGY STAR rated computers		2009	2011
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress	67	% of fridges are ENERGY STAR rated	As old fridges needed replacement we replaced 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 appliances are ENERGY STAR rated	As old appliances need replacement, we replace with new ENERGY STAR models	Ongoing replacement with new ENERGY STAR rated appliances	1998	No End Date (Continuous)
Behaviour change program							
Encourage staff to use air dry setting on dishwashers	In Development			Developed newsletter to offer green tips	Add this strategy to newsletter	2011	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress			Verbal encouragement to all staff to over-ride individual areas	Continue Strategy	2007	No End Date (Continuous)

The Board of Education of School District #28 Quesnel - 2011 Carbon Neutral Action Report

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Completed in 2011	100	% of our buildings have posters and stickers	We ran a contest for posters regarding energy conservation. The winners art work was turned into posters and stickers. These were distributed throughout the District.	New contests will be developed to focus efforts in other areas.	2011	No End Date (Continuous)
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	34	% of total paper purchased contains 30% recycled content	We continue to centralize the purchase of 30% recycled content standard letter size paper, purchasing by the truckload	Continue to purchase truckloads of 30% recycled content paper	2010	No End Date (Continuous)
Purchase 40% post-consumer recycled paper	Ongoing/In Progress	63	% of total paper purchased contains 40% recycled content	We purchased from a supplier that offered 40% recycled content	We will look for additional supplier to continue purchasing 40% recycled content paper. Current access is to 30% recycled content paper	2011	No End Date (Continuous)
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	80	% of network printers or photocopiers are set to automatic double-sided	Buy only duplexing printers, set all to default to double sided	Continue buy only duplexing printers strategy	2007	2013
Electronic media in place of paper							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress			Set up Groupwise, web site and mailing lists	Set up Wiki and encourage users to move away from paper	2009	2014
Use electronic document library for filing common documents	In Development			We are using web site for this purpose	Provide additional shared folders to broaden access	2009	2014
Post materials online that were previously printed	Ongoing/In Progress			Posted HR forms on website	Continue to find opportunities for electronic documents	2009	No End Date (Continuous)
Behaviour change program							
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress	60	% of meetings are paperless	Purchased Board of Education electronic meeting software and centralized hardware that allows us to hold paperless meetings for Public, In-Camera and Standing Committee meetings	Continue to find opportunities to reduce paper in meetings	2011	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress			Continual encouragement to re-use scrap paper	Continual encouragement to re-use scrap paper	1998	No End Date (Continuous)

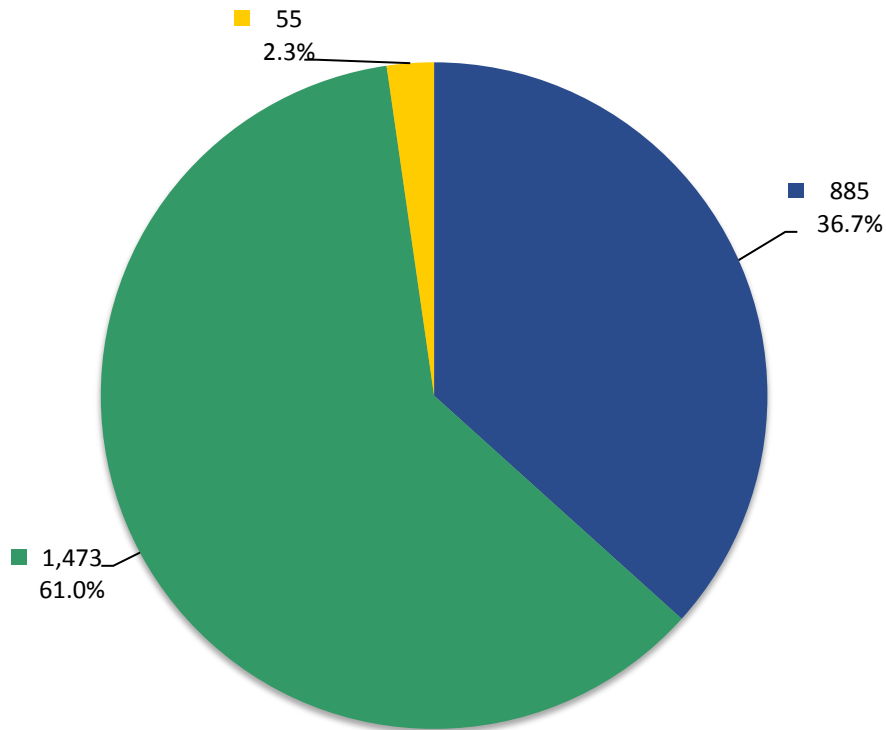
The Board of Education of School District #28 Quesnel - 2011 Carbon Neutral Action Report

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 <i>Greenhouse Gas Reduction Targets Act</i> . 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 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Business Travel							
Behaviour change program							
Train staff in web-conferencing	Ongoing/In Progress	13	% of staff are trained web-conferencing	None	Provide training as requested and required	2007	No End Date (Continuous)
Train staff in video-conferencing or provide technical support for video-conferencing set-up	In Development	2	% of staff are trained in video-conferencing or have access to technical support	None	Provide training as requested and required	2007	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress	2	% of staff trained in video-conferencing or have access to technical support	Offered orientation and training in utilizing "Elluminate" as a platform for offering peer to peer and instructional based learning.	Continue using and educating the system in using this software.	2011	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress	5	% of staff carpool to meetings or maintenance staff to job site	Staff are regularly reminded and encouraged to carpool to meetings and venues outside the District.	Ongoing education regarding the economic and carbon footprint value of carpooling.	2000	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	2	Corporate meetings held	The Board of Education introduced and adopted policy No. 702 Environmental Sustainability in June 2011.	Implement policy No. 702 Environmental Sustainability throughout the District and engage staff and students.	2011	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	Ongoing/In Progress			Budget of \$5000 to be used for implementing school based green initiatives	Continue to identify resources to be directed towards Climate Action items	2011	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	In Development			Begin to encourage individuals and organizations in the community to adopt activities that collectively promote sustainability.	Initiate discussions regarding a community garden, lights out campaign and recycling plastics/cardboard/glass/metals in schools.	2011	No End Date (Continuous)
Awards/Recognition							
Establish a sustainability/green awards or recognition program	Completed in 2011			The Board established funding to offer schools to implement green initiative projects.	Continue to identify and develop green initiative projects for schools to get involved in.	2011	No End Date (Continuous)
Staff awareness/education							
Provide education to staff about the science of climate change	Ongoing/In Progress	7	% of households with green actions progress report	Students receive lessons on climate change and sustainability. Learning resources are available in the library.	Ongoing inclusion of lessons regarding climate change and sustainability as this is an area that is expanding in scope.	2000	No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress	7		The District held a Poster and Sticker Contest on "Energy Conservation" for Grade 1- 8. We published posters and stickers for all winners, these were then placed in every school in the District.	Students will continue to practice conservation daily by turning out lights when they leave a room.	2012	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress			Our weekly District "Update 28" focuses on one green tip in every issue.	Add "Green Tip" to all School Newsletters	2012	2014
Client/public awareness/education							

The Board of Education of School District #28 Quesnel - 2011 Carbon Neutral Action Report

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
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 share lessons learned with their parents and education is perpetual	Continue to educated students, to enable sharing with parents and broader community	2007	No End Date (Continuous)
Provide green tips on client/public website or in newsletters	Completed in 2011			Our weekly newsletter - "Update 28" provides one green tip in every issue that employees can incorporate into their daily routines		2011	2011
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	Ongoing/In Progress	20	% of Facilities actively participating in recycling service pick up	Approval received to add one more facility to participate in recycling service pick up to reduce and divert waste	Add additional sites to program as they become prepared to change behaviour habits.	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	12	% of consumable non-paper supplies incorporate recycled content	Purchased supplies (pens, toner cartridges, etc) that incorporate recycled content	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	45	% of Facilities have utilized best practices when replacing furniture or carpet	As floor replacement was required, the best practice of switching to linoleum was incorporated. This strategy reduces cleaning with chemicals, dust accumulation and adds a longer life span of the floors	Continue the practice of carpet replacement with linoleum flooring.	1995	No End Date (Continuous)
Building construction, renovation, and leasing							
Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities	Completed in 2011			Created Policy 702 - Environmental Sustainability incorporates material consumption acknowledgement into consideration		2011	2011
Incorporate lifecycle costing into new construction or renovations	Ongoing/In Progress			VFA Incorporates into our capital planning process and includes in project identification reports	All facilities will undergo lifecycle costing analysis as part of new construction and renovations projects 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	25	% of facilities are scent-free	Baker, McNaughton, Pinecrest, Baker all added to scent-free locations	Continue to introduce scent-free buildings as demand increases	2000	No End Date (Continuous)

**School District 28 - Quesnel School
Greenhouse Gas Emissions by Source
for the 2011 Calendar Year (tCO₂e*)**



Total Emissions: 2,413

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion (Building Heating and Generators) and Electricity
- Supplies (Paper)

Offsets Applied to Become Carbon Neutral in 2011 (Generated May 18, 2012 12:01 PM)

Total offsets required: **1,675**. Total offset investment: **\$41,875**. Emissions which do not require offsets: **738** **

*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.