

## **Board Of Education of School District #60 (Peace River North)**

# **2012 Carbon Neutral Action Report**

### ***Executive Summary***

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Peace River North School District is entering its 12<sup>th</sup> year of energy conservation continuing on a course set with the direction to reduce, reuse and recycle. However the district has also added the dimensions of re-think, refuse and re-purpose to the mandate of carbon neutrality and personal responsibility. We will continue our relationship with B.C. Hydro as a Power Smart Partner building on past successes to continue to reduce all forms of energy consumption. The district continues to grow and all forms of energy conservation are considered and as much as possible built into new and renovated construction.

### ***2012 Greenhouse Gas Emissions***

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Total emissions generated by the operations of School District #60 during the 2012 year totaled 4362 tonnes of CO<sub>2</sub>. Buildings accounted for 2664.80 tCO<sub>2</sub>; fleet emissions were 1509.70 tCO<sub>2</sub>; indirect emissions totaled 96.75 tCO<sub>2</sub>, and paper accounted for 90.81 tCO<sub>2</sub>.

### ***Offsets Applied to Become Carbon Neutral in 2012***

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Total emissions for all sources generated by School District #60 were 4362 tCO<sub>2</sub>e. As required by section 5 of the Carbon Neutral Government Regulation 1246 tonnes CO<sub>2</sub>e of emissions resulting from the operation of school buses were reported as part of our greenhouse gas emissions profile in 2012. However they were not offset as they are out of scope under section 4(2)(c) of the Carbon Neutral Government Regulation. School District #60 has applied the balance of 3116 tCO<sub>2</sub>e to become carbon neutral in 2012.

### ***Actions Taken To Reduce Greenhouse Gas Emissions in 2012***

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Areas targeted in 2012 include:

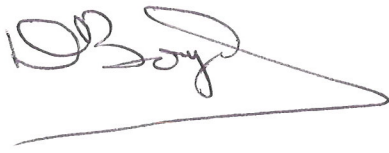
- Reducing water consumption through the installation of low flow sensor faucets and low consumption toilets during renovations
- Installation of 10 waterless urinals at rural locations to reduce lagoon load and familiarize staff with the operation and cleaning procedures.
- Replacement of 10 inefficient hand dryers with high efficiency models
- Continuation of the re-calibration program of the direct digital control systems
- Continued replacement of exit signs with self-powered units
- Continued replacement of pre 1980 furnace units with high efficiency models, completing the program.
- Continued relationship with Destination Conservation to provide awareness and coaching sessions in the classroom
- Support the green team program in four locations and offer the same program to all locations
- 2.5KW working voltaic solar panel is used for classroom education at the high school.

### ***Looking Forward 2013-2015***

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School District #60 is fully committed to the conservation of all forms of energy. Education of staff and students continues to be a priority both from awareness and life style perspectives. Recalibration will be one of the highlighted items for 2013. We will continue to upgrade mechanical systems as funding permits while seeking and requesting additional funding opportunities. Ministry of Education funding for facilities is requested yearly and as provided applied to energy reduction. High efficiency furnace units are presently being installed and mechanical engineering on lower performing sites is underway for inclusion in future years funding applications. On site staff are being provided with instruction on facilities maintenance to increase efficiency and partnering with outside agencies to provide student involvement.

Submitted By:

A handwritten signature in black ink, appearing to read "Doug Boyd", with a long horizontal line extending from the end of the signature.

Doug Boyd

Secretary Treasurer, SD #60



**"TOGETHER WE LEARN"**

School District 60 Peace River North - 2012 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 Greenhouse Gas Reduction Targets Act.					
Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Mobile Fuel Combustion (Fleet and other)					
Behaviour change program					
Provide fleet driver training to reduce fuel use	Ongoing/In Progress	Due to changeover of drivers each year we have ongoing professional development driver training programs for both new and seasoned drivers.	ongoing professional driver training programs continued	2008	No End Date (Continuous)
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	In Development	Installation of anti-idling signage at all drop off and pick up points. As well communication by parent newsletters.	Continue with newsletters and ensure signs are still posted.	2010	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress	District vehicles provided to rural staff for daily commute to rural locations.	Continuation of district vehicles.	2008	No End Date (Continuous)
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	In Development	provide bike racks and lockable areas for staff to leave clothing and helmets. Monitor usage to determine further needs.	continue to monitor staff usage.	2010	2014
Vehicle fuel efficiency					
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	We are cognizant that vehicles need to be sized for the operation and are purchasing as such.	continue with replacement as funding and needs permit	2008	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	In Development	continuation with providing the proper sized bus for the route. In some cases this means that we have "upsized" the bus making less trips.	continue as funding permits	2009	No End Date (Continuous)
Perform regular fleet maintenance to improve fuel-efficiency	Ongoing/In Progress	regular maintenance and documentation of all district vehicles	continuation of regular maintenance program	2008	No End Date (Continuous)
Stationary Fuel Combustion, Electricity					
Behaviour change program					
Help staff reduce personal energy use through ""workstation tune-ups""	Not Yet Evaluated				No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	Campaign via email, websites and twitter to encourage staff to unplug devices over breaks, turn of devices at powerbars when not in use etc.	New ad-hoc committee working with Board Social Responsibility committee on a Quick Scale for environmental assessment of classroom, school, and department practices that will encourage behaviour change. Continued campaigns using social media and staff communication.	2009	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	Campaign via email, websites and twitter to encourage staff to unplug devices over breaks, turn of devices at powerbars when not in use etc.	New ad-hoc committee working with Board Social Responsibility committee on a Quick Scale for environmental assessment of classroom, school, and department practices that will encourage behaviour change. Continued campaigns using social media and staff communication.	2009	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress	Written reminders for custodial staff to close blinds at end of day. As well insulated shutters are deployed either automatically or manually on the exterior at some locations.	continue with reminders and installation of exterior shutters as funding permits	2008	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress	staff have no control of heating that has been setback at the end of the school week. Staff have to request heat to be turned up and this is only done for good reason. Staff are reminded to only use lighting that is required in their immediate vicinity and turn off when leaving.	areas that are frequented will be set for automatic lighting control. reminders will continue to be send to all staff.	2008	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress	written reminders for cleaning staff to turn off lights on their first rounds. As well we are looking at a sticker program to engage students in turning off unneeded lighting	continue with reminders and sticker program	2008	No End Date (Continuous)
Promote hot water conservation	Not Yet Evaluated				No End Date (Continuous)

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
IT power management					
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	Testing of software in lab setting.	Implementation in other labs.	2010	No End Date (Continuous)
Implement server virtualization	Ongoing/In Progress	Server virtualization continues.	Assessment of needs whenever a server is replaced to see if virtualization is appropriate.	2009	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Completed (in Reporting Year)	Normal procedure for any new computer or images.		2009	2009
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices as part of a print management strategy	In Development	Evaluated several models of multifunction devices. Disappointing results have been noted as some parts of devices have failed or are incompatible with other systems. This has resulted in devices needing to be replaced well before their expected end of life.	Continue to identify devices to remove and replace. Continue to evaluate different models and brands.	2010	No End Date (Continuous)
Apply auto-sleep settings on printers, fax machines, and/or multi-function devices	Completed (in Reporting Year)	Normal ongoing procedure to set auto-sleep on all printers.		2009	2009
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	We purchase refurbished computers from CFSBC and other commercial refurbishers. Reuse rather than new devices in many cases.	Continue to purchase refurbished and chose energy star models on new purchases.	2010	No End Date (Continuous)
Owned buildings					
Establish energy performance baseline for owned buildings	Not Yet Evaluated				No End Date (Continuous)
Perform energy retrofits on existing, owned buildings	In Development	Continuation of program to replace all low/mid efficiency furnace units with high efficiency units.	completion of furnace replacement. Audit of all low/mid efficiency boiler systems to plan replacement as funding permits.	2008	No End Date (Continuous)
Planning/management					
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Not Yet Evaluated				No End Date (Continuous)
Retrofit details for owned buildings					
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	replacement of 10 low efficiency furnace units with high efficiency models. Calibration of 50% of the CO2 sensors.	Continue with calibration of the remainder of the CO2 units. Completion of the furnace replacement program. Inventory of the low/mid efficiency boilers to plan replacement as funding permits.	2009	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	Lighting was replaced with T8 and electronic ballast units completed in 2003. We are evaluating LED lighting for our gymnasium areas.	possible installation of LED lighting in three gymnasiums.	2008	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	Recalibration of control systems with emphasis on CO2 and outdoor air requirements.	Completion of recalibration program.	2010	2013
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	Removal of batt insulation and replaced with spray-in foam at two location. These will be used as test areas to determine if this provides enough recovery to further the program. One building is completely spray foamed with insulated metal siding; the other is small area replacement of the batt insulation only.	Continue to monitor and evaluate installation.	2008	No End Date (Continuous)
Supplies (Paper)					
Behaviour change program					
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Completed (in Reporting Year)	Have been using moodle and other web tools for collaboration. Board investigating CivicWeb to move to paperless meetings.		2008	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress	Continuing to utilize web tools like moodle or websites to distribute materials.	Investigating CivicWeb web tools for Board for paperless meetings. Will continue to work with staff to provide more content online where appropriate rather than by paper.	2008	No End Date (Continuous)
Electronic media in place of paper					

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	Modelling of practice, use of tools like Blackboard Collaborate (Elluminate) for meetings rather than travelling. User education. Posting documents to server shares for staff to access.	Modelling of practice, use of tools like Blackboard Collaborate (Elluminate) for meetings rather than travelling. User education. Meeting with professional development staff to discuss further ways to reduce paper consumption.	2008	No End Date (Continuous)
Use electronic document library for filing common documents	Completed (in Previous Year)				No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Completed (in Previous Year)				No End Date (Continuous)
Other Paper Supplies Actions					
After having successfully implemented a crediting and web printing system at our Energetic Learning Campus we will be rolling out this feature to our high school and two middle schools.	Ongoing/In Progress	Monitored system and user acceptance to verify that it will allow students to print reliably but reduce the amount of printing and waste.  Worked with middle schools and high school on implementation of the credited printing for students in future year.	Implement at middle school and high school. Work to expand to other schools within district.	2010	No End Date (Continuous)
Paper Type					
Purchase 30% post-consumer recycled paper	In Development	Two locations are sharing their success using 30% post-consumer recycled paper with other interested parties. As well we are sending out the current prices of new and recycled paper to all locations	encourage greater usage of recycled paper	2009	No End Date (Continuous)
Printer/document settings					
Switch networked printers and photocopiers to automatic double-sided	In Development	Implementing PaperCut printing platform in schools. Using the PaperCut system it is possible to force double sided printing on duplex printers.	Set double sided printing on the PaperCut system on duplex printers in all schools.	2010	No End Date (Continuous)



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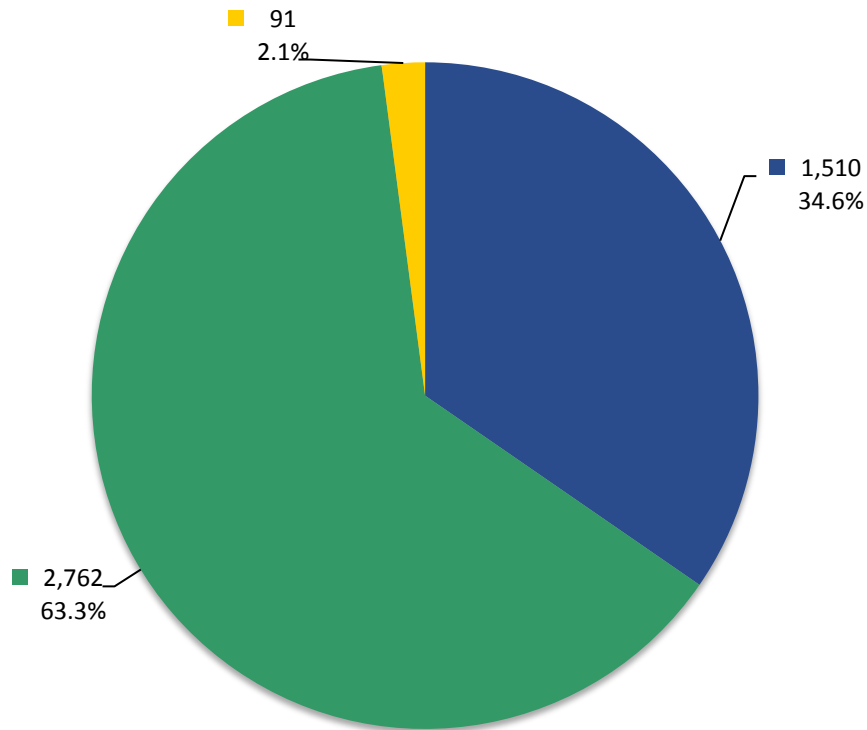
Actions to Reduce Provincial Emissions and Improve Sustainability					
The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the Greenhouse Gas Reduction Targets Act. Public sector					
Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Business Travel					
Behaviour change program					
Train staff in web-conferencing	In Development	most web based conferencing is done one on one on individual work stations. Staff can choose which conferences they want to attend and time is scheduled.	continue	2010	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Not Yet Evaluated				No End Date (Continuous)
Encourage carpooling to meetings	In Development	Due to the nature of our climate and the demands of individuals most carpooling is used to arrive at the place of work. We supply one vehicle to transport staff to a rural location daily.	continue	2008	No End Date (Continuous)
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	Not Yet Evaluated				No End Date (Continuous)
Policy and budgeting					
Create a low-carbon travel policy or travel reduction goal	Not Yet Evaluated				No End Date (Continuous)
Virtual meeting technology					
Make desktop web-cameras available to staff	Not Yet Evaluated				No End Date (Continuous)
Education, Awareness, and Engagement					
Awards/Recognition					
Establish a sustainability/green awards or recognition program	Not Yet Evaluated				No End Date (Continuous)
Staff Professional Development					
Support green professional development (e.g., workshops, conferences, training)	In Development	Partnership with Destination Conservation to provide training and resources to four locations in the program	Encourage locations to enlist with Destination Conservation both as a educational tool and a social responsibility skill.	2010	No End Date (Continuous)
Include green options in employee performance measurement system	Not Yet Evaluated				No End Date (Continuous)
Staff awareness/education					
Provide education to staff about the science of climate change	Not Yet Evaluated				No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	In Development	Committee met to discuss how to have staff involvement with efforts to reduce all forms of waste.	Committee will continue to develop a program to involve all staff in the reduction of waste using news and feedback letters	2010	No End Date (Continuous)
Provide green tips on staff website or in newsletters	In Development	Committee struck to develop dialogue with all staff by the use of newsletters. Still in the development stage.	Committee should be ready to provide the first newsletters to staff and evaluate the benefit.	2010	No End Date (Continuous)
Team-building					
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	In Development	We have green teacher led student groups at about 25% of the locations. They are providing information to all other locations and encouraging the use of student groups everywhere.	continue with and encourage expansion of the program	2011	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	In Development	Teacher are leading groups on their own time at present.	continue with green program	2010	No End Date (Continuous)
Other Sustainability Actions					
Building construction, renovation					
Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities	Ongoing/In Progress	Although there is no policy each renovation project is looked at from what can be reused, donated to other projects or given away. We	Continue with the reuse program	2008	No End Date (Continuous)

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Actions to Reduce Provincial Emissions and Improve Sustainability					
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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
		keep a list of locations and what they are looking for and reassign assets as they become available.			
Incorporate lifecycle costing into new construction or renovations	Not Yet Evaluated				No End Date (Continuous)
Commuting to and from home					
Offer staff a compressed work week	Ongoing/In Progress	Staff have the option of 4/10 hour shifts over the summer when school are closed.	Continue with 4/10 option.	2009	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Ongoing/In Progress	Installation of two shower/locker areas as a trial basis; monitor usage	Discuss with staff as to whether the program is successful.	2009	No End Date (Continuous)
Provide secure bicycle storage	Ongoing/In Progress	Locations are available in all buildings for lockable bicycle storage	Continue with having space available for bicycles.	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.)	In Development	Although the costs associated with the procurement of paper is still higher than new all locations are being asked to try using recycled content paper and report any problems	continue to monitor the purchase of paper and communicate the purchase of recycled content	2010	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.)	Not Yet Evaluated				No End Date (Continuous)
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	In Development	There are a few locations that are testing the green product line for floor cleaning. We have been using compostable garbage bags as funding permits.	Monitor and seek solutions to the use of green products where there is reluctance to use same.	2009	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	In Development	Installation of recycling containers at all locations. Presently installing water dispensers to replace bottled water machines.	Continue with installation of dispensers and monitoring of waste.	2009	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress	We have used an approved bulb crusher for some time now; this saves storage space and makes it easier for the collection truck to move the barrels to the recycling facilities. Paint, batteries, used oil, oil filters, and electronic parts are all collected and sent back to recycling facilities. All pallets are reused, some by ourselves most by other businesses.	continue with the return to recycling facility program.	2008	No End Date (Continuous)
Water conservation					
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	In Development	low flow fixtures are installed during all renovations of water and sewer as a normal installation requirement	Continue with low flow strategy	2009	No End Date (Continuous)



**School District 60 - Peace River North (Fort St. John)**  
**Greenhouse Gas Emissions by Source**  
**for the 2012 Calendar Year (tCO<sub>2</sub>e\*)**



**Total Emissions: 4,362**

- 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 2012 (Generated May 31, 2013 10:17 AM)**

Total offsets required: **3,116**. Total offset investment: **\$77,900**. Emissions which do not require offsets: **1,246** \*\*

\*Tonnes of carbon dioxide equivalent (tCO<sub>2</sub>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.