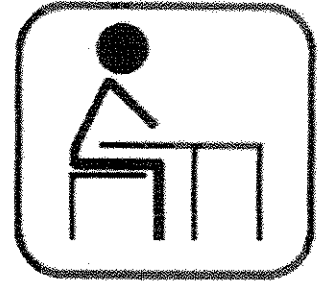


School District No. 57 (Prince George) - 2011 Carbon Neutral Action Report

Executive Summary

School District No. 57 (Prince George) has continued making changes to our district in an effort to become carbon neutral. Over the past decade we have improved our energy performance in the areas of HVAC, lighting, appliances, equipment and air quality. Of particular note are some of the challenges of living in the north that require better management of heat and light over the long winter season. To this end we have continued the replacement of boilers, furnaces, lighting fixtures, lamps and improvements to energy star appliances and equipment.



In 2011, we reduced our maintenance fleet by 8.5% and combined our crews in an effort to conserve fuel. A solar photovoltaic demonstration project was completed at Highglen Montessori while LED lighting was introduced to Prince George Senior Secondary's theatre. Furthermore, a memorandum of Understanding was signed with FortisBC to explore the potential to replace all of the district's aging boiler inventory with new boilers or alternate energy systems. Work has already commenced on engineering studies for this joint venture.

Overviews

Actions Taken to Reduce Greenhouse Gas Emissions in 2011

Some of the actions taken in 2011 to reduce GHG were; replaced and reduced the number of vehicles in our fleet and completed furnace, boiler replacements and air handling unit upgrades at two other facilities. Lighting improvements were conducted and included the use of occupancy controls and LED technologies.

Operational Changes in 2011

We have continued implementing changes to allow video conferencing, convert incoming and outgoing FAX documents to electronic email, and have targeted fleet fuel consumption behavioural changes as part of our part in reducing GHG emissions.

2011 Green House Gas Emissions

Mobile Combustion Emissions for 2011 amounted to 430.43 tCO₂e.

Building Emissions contributed 6,548.33 tCO₂e.

Office supplies totalled 164.4 tCO₂e.

Carbon Neutral or Offset Exemption of 14 tCO₂e.

Total emissions were therefore 7,129 tCO₂e, rounded to the nearest whole metric tonne.

Following the public release of School District No. 57's 2010 Carbon Neutral Action Report, it was determined that the total emissions for the 2010 calendar year were over reported by 4.87 tCO₂e and offsets required to become carbon neutral in 2010 were therefore over reported by 4.87 tons CO₂e. The difference in offsets required has been applied against our 2011 emissions.

It was estimated that fugitive emissions from stationary cooling comprised less than 0.01% of School District No. 57's total emissions, and the ongoing effort to collect or estimate emissions from this source annually is disproportionately onerous. Thus, these emissions meet both the requirement to be below 1% of School District No. 57's total emissions and the requirement to be onerous to collect. For this reason, emissions from this source have been deemed out-of-scope and are not included in School District No. 57's total greenhouse gas emissions profile or offset purchase.

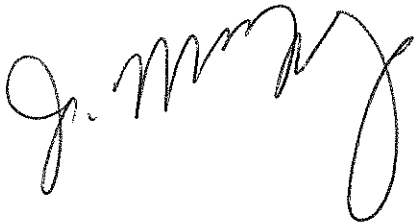
Offsets Applied to Become Carbon Neutral in 2011

Total offsets purchased: 7,124 tCO₂e

Total offset investment: \$199,472.

Plans to Continue Reducing Greenhouse Gas Emissions 2011 – 2012

- Continuation of the HVAC boiler and furnace replacements.
- Replacing light fixtures and lamps with BC Hydro PowerSmart Express approved products.



John McLay

Assistant Superintendent

School District No. 57 (Prince George)

School District No. 57

- 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 *Greenhouse Gas Reduction Targets Act*.

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 larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	10	% of vehicles down-sized since start year indicated	Returned a number of maintenance vehicles and combined staff, along with reducing the size of some of the management vehicles.	Continue to assess fleet vehicle needs as our schools and demographics change.	2009	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	All units are assessed monthly to maximize efficiency and fuel economy. This is a comprehensive check of tire pressure, oil changes, filter changes and scheduled servicing.	All units are assessed monthly to maximize efficiency and fuel economy. This is a comprehensive check of tire pressure, oil changes, filter changes and scheduled servicing.	2008	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Planning/management							
Reduce office space (square meters) per employee	In Development			We have been closing and re-purposing properties in order to reduce the fiscal and environmental cost of maintaining these properties.	Further reduction and closing of properties, including removal of portables is planned for summer 2012.	2009	No End Date (Continuous)
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	4	% of buildings have a real time metering system installed	This is currently used for load shedding to reduce peak demand on electrical systems.	More properties may be included upon evaluation.	1999	No End Date (Continuous)
Owned buildings							
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress			Applied for LEED NC Gold Certification at new Duchess Park Secondary School.	No new schools planned for.	2010	No End Date (Continuous)
Incorporate integrated design process into new construction or during renovations of owned buildings	Ongoing/In Progress	75	% of buildings built or renovated since start year indicated used the integrated design process	Duchess Park Secondary School incorporated LEED Gold NC design.	All stakeholders are consulted during renovations, including maintenance tradesmen and consultants, on all renovation projects.	2006	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Ongoing/In Progress			Monitoring of refrigerant systems, maintenance and repairs. Less than 1% of our total emissions are contributable to fugitive emissions.	Monitoring of refrigerant systems, maintenance and repairs.	2010	No End Date (Continuous)
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	90	% of owned buildings have undergone energy retrofits since start year indicated	Building Energy Management Control Systems and upgrades have been implemented. Lighting and heating systems replaced.	Future retrofits will be based on funding availability.	Started before 1995	No End Date (Continuous)
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress			We have replaced 38 furnaces and two complete boiler systems with more efficient models.	Three more schools boiler systems replacements are planned for summer 2012. A Memorandum of Understanding has been signed with FortisBC to explore the potential of replacing all of our aging boiler inventory.	2010	No End Date (Continuous)

School District No. 57

- 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	Ongoing/In Progress	30	% of retrofits since start year indicated had lighting systems upgrades	Lighting upgrades were completed in Kelly Road Secondary and P.G.S.S. Secondary.	50% of our Buildings are planned for T-12 to T-8 upgrades for Summer/Fall 2012. Further upgrades to the remaining buildings planned for 2013.	2011	2012
Upgrade/adjust control systems during retrofits	Ongoing/In Progress			All locations are on some form of control system. These are evaluated on an ongoing basis and monitored for improvements and performance.	Continue with commissioning and balancing of all systems. All systems upgraded to latest software programming in 2012. New batteries installed and testing done on each building.	Started before 1995	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress			Nothing additional	Nothing planned for.	2010	No End Date (Continuous)
Install an on-site renewable energy demonstration project	Completed in 2011			Installed 2.5 kw Photovoltaic (PV) system through SolarBC grant.	Nothing planned for.	2011	2011
IT power management							
Implement server virtualization	In Development				Reduce the number of servers in the district.	2009	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	100	% of computers are ENERGY STAR rated	Computer replacement program at a number of elementary and secondary schools were completed in the summer.	Continuation of a number of elementary and secondary school computer replacements.	2007	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			This information was not tracked. All new fridges are Energy Star approved.	Continue buying Energy Star appliances.	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			As equipment is evaluated and deemed necessary to replace, it is replaced with ENERGY STAR equipment where applicable.	We will continue to make these upgrades as needed.	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			Whenever possible staff are encouraged to unplug electrical equipment when not in use.	This will be an ongoing process that could possibly include and more formal form of notification.	2007	No End Date (Continuous)
Promote hot water conservation	Ongoing/In Progress			Hot water supply is limited to custodial use only in school facilities during school breaks.	The process will continue.	2009	No End Date (Continuous)
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Ongoing/In Progress			We currently purchase 30% recycled paper where we can.	Continue Program	2010	No End Date (Continuous)
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	In Development				/	2011	No End Date (Continuous)
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	In Development				/	2011	No End Date (Continuous)
Electronic media in place of paper							

School District No. 57

- 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
Use electronic document library for filing common documents	Ongoing/In Progress		In various areas, we are in the process of eliminating paper copies of documents in favour of electronic libraries on our server. Areas include but are not limited to student discipline system, student transfers, kindergarten registration, job applications, detention tracking, timesheets pay statements and T4s.	We will continue to evaluate the possibilities for this item.	2008	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress		All documents relating to the facilities or that is required for viewing by staff and the public is made available on our website and our intranet. This may include facility information, answers to questions and other commonly used documents.	All departments will continue to provide information in this manner.	2009	No End Date (Continuous)
Behaviour change program						
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress		Committees have instructed attendees to bring their laptops for note taking and minute distribution.	Continuation of the program.	2010	No End Date (Continuous)

School District No. 57

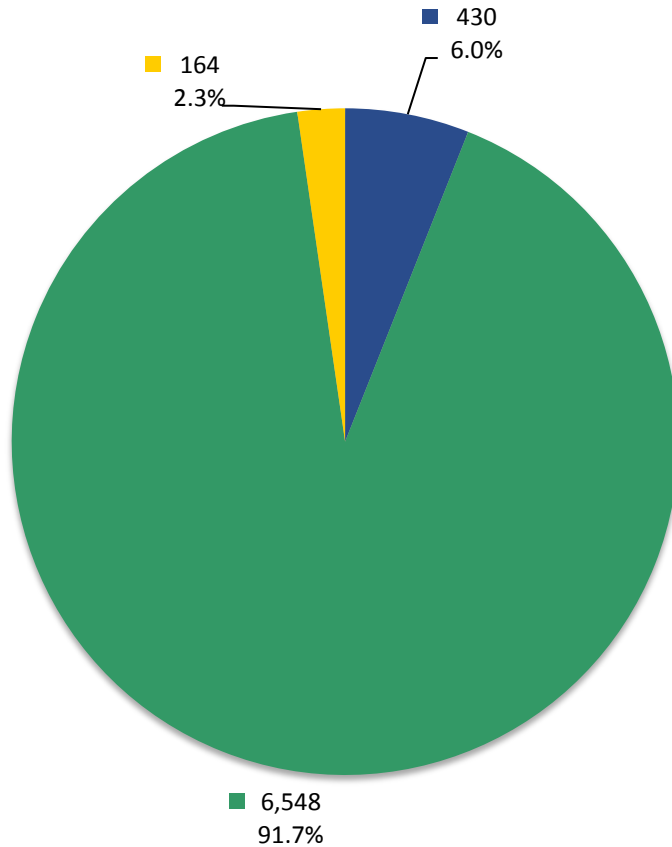
- 2011 Carbon Neutral Action Report

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 *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 12/31/11)	Performance to Date (as of 12/31/11)	Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year	
Business Travel							
Policy and budgeting							
Create a low-carbon travel policy or travel reduction goal	Ongoing/In Progress		Monitored and reported on fuel consumption to each individual driving a maintenance vehicle.	Attempt to reduce our fleet consumption by 10% from the previous year.	2009	No End Date (Continuous)	
Virtual meeting technology							
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress		Whenever possible, we have used web-conferencing for training sessions, meetings and other long distance discussions.	More action may be taken to formalize the use of web based communication.	2008	No End Date (Continuous)	
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Ongoing/In Progress	50	% of meeting rooms have access to video-conferencing equipment	Video conference facilities have been setup for the rural facilities, amongst a number of renovated areas within the city.	Attempt to formalize the use of web based communication for all meeting room areas.	2008	No End Date (Continuous)
Behaviour change program							
Train staff in web-conferencing	Ongoing/In Progress		Training and setup instructions were made available online to access our web-conferencing software.	Continue monitoring and evaluation of web-conference software.	2009	No End Date (Continuous)	
Train staff in video-conferencing or provide technical support for video-conferencing set-up	Ongoing/In Progress		Training and setup instructions were made available online to access our web-conferencing software.	Provide additional training and instructions as required.	2010	No End Date (Continuous)	
Education, Awareness, and Engagement							
Team-building							
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	In Development			Develop policies and framework for climate action committees.	2011	No End Date (Continuous)	
Other Sustainability Actions							
Waste reduction/diversion							
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress		Recycling of mercury from fluorescent tubes, the disposal of PCB ballasts and the removal of asbestos products from schools has taken place throughout the year.	Continuation of the fluorescent tube recycling, PCB ballast harvesting and removal of asbestos products will continue to be a priority.	2008	No End Date (Continuous)	

**School District 57 - Prince George
Greenhouse Gas Emissions by Source
for the 2011 Calendar Year (tCO₂e*)**



Total Emissions: 7,143

- 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 12:20 PM)

Total offsets required: **7,130**. Total offset investment: **\$178,250**. Emissions which do not require offsets: **14** **

*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.