



SCHOOL DISTRICT #81
FORT NELSON

2011 CARBON NEUTRAL ACTION
REPORT OVERVIEW

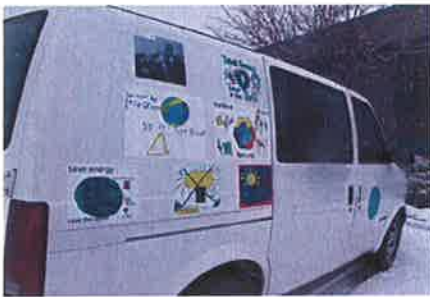


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EXECUTIVE SUMMARY



School District #81 (Fort Nelson) continued throughout 2011 to focus on reducing our carbon footprint. We partnered with four organizations to continue to develop sustainable operating practices in the areas of energy conservation, education and awareness.

In January of 2011 we received approval from B.C. Hydro for our application for the Opportunity Assessment for the Continuous Optimization Program for our local highschool. Continuous Optimization is a retro-commissioning program for schools larger than 50,000 square feet that have direct digital control systems.

In the spring we hosted our second annual Earth Day celebration, focusing on an Energy Conservation Theme, entitled "Lights Out". This event was co-sponsored with the Northern Rockies Community Arts Council, the local theatre, and the School District. An Open House, with refreshments, was jointly hosted on April 21, 2011 at the local Phoenix Theatre, with all of the recyclable art and painting/drawing entries on display for public viewing.

Once again evidence of our commitment to encouraging behavior change is noted on our school district maintenance van that proudly displays decals produced from the winning entries of the Earth Day artwork competition.



SCHOOL DISTRICT #81 (FORT NELSON)

In November we participated in a partnership event with GreenLearning Canada and our local Fort Nelson District Teachers' Association hosted as one option to choose at our Professional Development Days. "GreenLearning Canada envisions a generation of young Canadians who are inspired to actively create a sustainable and just world. Their mission is to create innovative teaching resources and other rich educational experiences that empower Canadians to create positive environmental and social change in their own lives, schools and communities."

A handwritten signature in blue ink that reads "D Samchuck".

Diana Samchuck
Superintendent of Schools
School District #81 (Fort Nelson)

A handwritten signature in blue ink that reads "M Hall".

Margaret-Anne Hall
Secretary-Treasurer
School District #81 (Fort Nelson)



2011 GREENHOUSE GAS EMISSIONS

The following represents School District #81 (Fort Nelson)'s total 2011 greenhouse gas (GHG) emissions from all sources covered by the Greenhouse Gas Reduction Targets Act:

Mobile Fuel Combustion (fleet and other mobile equipment)-32.20

Stationary Fuel Combustion and Electricity (buildings)-537.13

Purchased energy – 27.41

Supplies (paper)-12.62

OFFSETS APPLIED TO BECOME CARBON NEUTRAL IN 2011

As required by Section 5 of the Carbon Neutral Government Regulation 9 tonnes CO₂e of emissions resulting from executive travel 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)© of the Carbon Neutral Government Regulation.

In the 2010 reporting year School District #81 (Fort Nelson) had a credit of 5 tonnes totaling \$125.

Therefore, School District #81 total offsets purchased for 2011 were 600 tonnes totaling \$15,000 prior to taxes.



SCHOOL DISTRICT #81 (FORT NELSON)

EARTH DAY

APRIL 21, 2011

Contests:

Recyclable Art Competition – Students are invited to participate in a Recyclable Art Competition. Only individual student entries will be eligible.

Art Work – Students are invited to create posters with a "lights out", **Energy Conservation** theme. These posters will become decals on our white maintenance van.

Please have all art work received at the Board Office by April 15, 2011 with the winners announced on April 21, 2011.

PRIZES TO BE AWARDED AT SCHOOL ASSEMBLIES.
Art Work will be displayed at the Phoenix theatre from April 27.

If you have any further questions please contact:

Margaret-Anne Hall,
250-774-2591 (mhall@sd81.bc.ca) at the School Board Office

EMISSIONS REDUCTION ACTIVITIES

ACTIONS TAKEN TO REDUCE GREENHOUSE GAS EMISSIONS IN 2011

In January of 2011 the School District applied, and was successful, in their application to participate in B.C. Hydro's Continuous Optimization Program at our largest site, Fort Nelson Secondary School. The Continuous Optimization Program is a re-commissioning program that focuses on low cost operational savings. The primary focus for this program is on HVAC systems through the direct digital control system to adjust sequencing, schedules, and set points. The intention is to increase the energy savings target.

B.C. Hydro fully funds the current meter upgrade to a pulse meter and fully funds the

Enterprise Energy Management software service provider (internet) for reporting and analysis. We look forward to retrieving concrete data, over time, that will assist us in making changes to our equipment for maximum efficiency. As well, the pulse meter will enable us to identify key time periods to address for possible behavior change to reduce our carbon footprint.

On April 21, 2011 the School District partnered with our local Northern Rockies Community Arts Council and Theatre to host an Open House at our local theatre.



SCHOOL DISTRICT #81 (FORT NELSON)

The walls of the art gallery in the Phoenix Theatre were covered in student artwork and tables were covered with recycled artwork all depicting the theme of our second annual Earth Day celebration, "Lights Out".

Pictures were taken of all of the winning entries in the competition and transferred to decals that are now proudly displayed on our maintenance van. Community members are reminded that environmental behavior change is critical to the health of our planet.

In early summer we partnered with our community Northern Environmental Action Team that was hosting the first Fort Nelson Arbour Day Event. Trees were planted on our board office site as evidence of our interest in planting, nurturing and celebrating the impact that trees have in our environment.

We are avid supporters of our Northern Environmental Action Team in advertising and participating in their various initiatives throughout the year including the river clean up; annual tin can recycling; recycling of gently used clothing; and other ongoing recycling events randomly advertised.



In November Kathy Worobec, Director of GreenLearning Alberta, participated in Fort Nelson District Teachers' Association's professional development days by leading a full day teacher workshop on renewable energy, energy sources, and GreenLearning programs. Nexen Inc., an oil and gas company developing energy

resources in our local area, provided travel funding for Kathy to make this event possible. District staff learned to build wind turbines with construction plans from GreenLearning's renewable energy website.



In an effort to reduce plastic in our landfill and draw attention to the protection of our water resources, hydration stations were purchased for four of our local intown schools. In 2008 over 39 billion single-use water bottles were consumed in the United States – a number double the amount used only five years earlier. Of those 39 billion bottles, reports show that only 32% were actually recycled, leaving 26 billion water bottles that could end up in landfills. We are confident that the statistics for Canada, in terms of percentage increase and recycled product, would be very similar. On average, a single bottle of water costs between 500 and 1000 times the cost of municipal tap water.

Our local schools continue to encourage a reduction in our carbon footprint through the following activities:

- Keeping banks of lights turned off when not needed
- Students and staff are asked not to print off the internet to save multiple pg printing
- This past year's graduation transitions were put online as working documents and were submitted to the teacher by email, saving paper
- This year's scholarship guide was made available on the school website, saving paper
- Student transcripts for School District scholarships have been reduced from 800+ copies to 8 copies for the selection committee
- A selection of second hand posters are





available for students

- Students are encouraged to recycle paper when making and designing projects
- Purchase of magazines in the highschool library have been curtailed – instead magazines that are displayed for student use are recycled from employee homes with newspapers and magazines recycled for student projects
- Envelopes are reused for inner school/district use
- We have a highly successful ink cartridge recycle program, in partnership with the local library
- We installed our first virtual server this year

PLANS TO CONTINUE REDUCING GREENHOUSE GAS EMISSIONS 2012-2014

School District #81 will continue to seek to identify initiatives to reduce our greenhouse gas emissions through 2012-2014.

It is our intention to complete the work associated with the B.C. Hydro Continuous Optimization Program. As well, investigation and awareness of B.C. Hydro's incentive programs will be ongoing. Of particular interest at the present time is the monitoring of our winter outdoor plug-ins.

Our partnership with GreenLearning Canada will continue with a visit, in the planning stages, for a representative to work with local teachers and our District Green Committee on initiatives to create sustainable positive environmental and social practices.

We will continue to work in partnership with our community Northern Environmental Action Team to support and participate in their environmental initiatives.



SCHOOL DISTRICT #81 (FORT NELSON)

We will continue to encourage our schools to participate in programs that reduce our greenhouse gas emissions including recycling programs and paper reduction practices and we will continue to sponsor an annual Earth Day event.

School District #81 (Fort Nelson) - 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							
Perform regular fleet maintenance specifically to improve fuel-efficiency	Ongoing/In Progress	100	% of vehicles are subject to regular maintenance for fuel efficiency	oil/air filters replaced 2x a year or every 5000 km/air pressure of tires checked weekly	same as previous year	2002	No End Date (Continuous)
Behaviour change program							
Provide fleet driver training to reduce fuel use	In Development						
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Completed in 2011			completed installation of signage		2009	2011
Encourage carpooling in fleet vehicles	Ongoing/In Progress			continue to encourage maintenance staff to carpool when appropriate	same as previous year	2009	No End Date (Continuous)
Other Mobile Fuel Combustion Actions							
Mail contract with BC Government	Ongoing/In Progress			continue with implementation of contract	same as previous year	2009	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress	12	% of fridges are ENERGY STAR rated	no steps taken	Replacement fridges will be Energy Star rating.	2009	No End Date (Continuous)
Behaviour change program							
Ask staff to unplug electrical equipment or switch off power bars when not in use	In Development				Will be a Green Club initiative.	2010	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	In Development				Will be a Green Club initiative.	2011	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress			No new dishwashers were purchased this year.	Will initiate with the purchase of a dishwasher for the Board Office.	2010	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	In Development				Will be a Green Club initiative.	2011	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	In Development				Will be a Green Club initiative.	2011	No End Date (Continuous)
Promote hot water conservation	In Development				Will be a Green Club initiative.	2011	No End Date (Continuous)
Other Stationary Fuel Combustion, Electricity, and Fugitive Emissions Actions							

School District #81 (Fort Nelson) - 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
Solar Panels to offset BC Hydro costs at our highschool.	Ongoing/In Progress			Have had discussion with the contractor for our Continuous Optimization Program to have the educational program connected to the panel for observation and instructional purposes.	Will have the work completed by the contractor.	2006	2012
Continuous Optimization Program	Ongoing/In Progress			Agreement was approved by BC Hydro and a contractor was selected.	Installation of the pulse metre and monitor training. Once data is collected then additional work will be identified to reduce our carbon footprint.	2011	No End Date (Continuous)
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	10	% of total paper purchased contains 30% recycled content	Continued to encourage schools to purchase recycled paper.	Will continue to encourage schools to purchase recycled paper.	2009	No End Date (Continuous)
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Completed in 2011	80	% of network printers or photocopiers are set to automatic double-sided	No new steps were taken as we completed this change in 2010.		2010	2011
Electronic media in place of paper							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress			Continue to install SharePoint software for BCEID users.	Will investigate further applications for the software.	2008	No End Date (Continuous)
Use electronic document library for filing common documents	In Development				Purchase of new copiers is pending. We will be discussing this feature with the supplier.	2011	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress			Continue to encourage staff to continue with this practice.	Continue to encourage staff to continue with this practice.	2009	No End Date (Continuous)
Behaviour change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress			Continue to encourage staff to use the software.	Will continue to encourage staff to use the software.	2008	No End Date (Continuous)

School District #81 (Fort Nelson) - 2011 Carbon Neutral Action Report

Actions to Reduce Provincial Emissions and Improve Sustainability

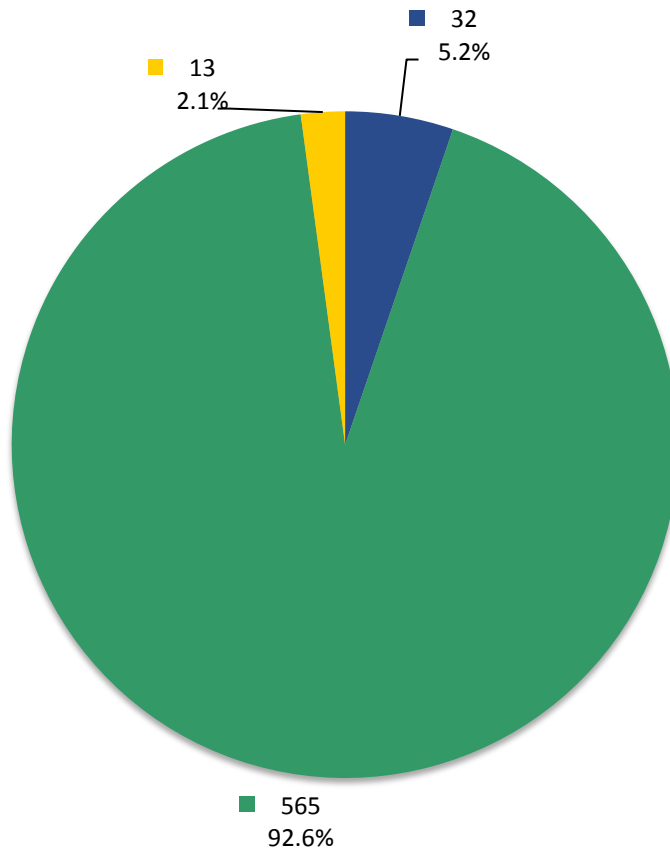
The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the *Greenhouse Gas Reduction Targets Act*. Public sector organizations can optionally use this section to 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						
Behaviour change program						
Train staff in web-conferencing	Ongoing/In Progress		Continue to encourage staff to participate in training sessions.	Continue to offer to train staff.	2009	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress		Encouraged staff to consider other options when offered by the presenters.	Will continue to encourage presenters to offer presentations through various options and will continue to encourage participants to consider other presentation options.	2008	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress		Encourage staff, when feasible.	Encourage staff, when feasible.	2006	No End Date (Continuous)
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	Ongoing/In Progress		Encourage staff, when feasible.	Encourage staff, when feasible.	2006	No End Date (Continuous)
Other Business Travel Actions						
Reduction of travel budget for Trustees.	Ongoing/In Progress		Reduced travel budget from 2010/11 was maintained for 2011/12.	Continue to monitor expenditures and encourage presenters to offer presentations through alternative methods.	2010	No End Date (Continuous)
Education, Awareness, and Engagement						
Team-building						
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Completed in 2011		Held a Green Club Meeting		2009	2011
Provide resources and/or dedicated staff to support teams	Ongoing/In Progress		Held an Earth Day Art Competition at the local Theatre - provided prizes to the winners.	Will continue with an Earth Day Competition and will research other events that are applicable.	2009	No End Date (Continuous)
Staff Professional Development						
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress		Partnered with GreenLearning Alberta to host a session at our local Teachers' Association Pro D days.	Continue with our partnership with GreenLearning Alberta - will have more teacher presentations.	2011	No End Date (Continuous)
Staff awareness/education						
Provide green tips on staff website or in newsletters	Ongoing/In Progress		Offered tips on our email system prior to Earth Day.	Continue to offer tips prior to Earth Day.	2010	No End Date (Continuous)
Client/public awareness/education						
Provide education to clients/public about the science of climate change	Ongoing/In Progress		The Science of Climate education is offered through student curriculum.	Will continue to offer the Science of Climate through student curriculum.	2009	No End Date (Continuous)
Provide education to clients/public about the conservation of water, energy, and raw materials	Ongoing/In Progress		Education regarding conservation is offered through student curriculum.	Will continue to offer the curriculum.	2009	No End Date (Continuous)
Provide green tips on client/public website or in newsletters	Ongoing/In Progress		Prior to Earth Day in 2011 green tips were sent out to all staff on a daily basis and were included on our school district website.	Will continue to share green tips.	2010	No End Date (Continuous)

School District #81 (Fort Nelson) - 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
Other Education, Awareness, and Engagement Actions						
Creation of Worm Farms	Ongoing/In Progress		Encouraged classes to establish worm farms.	Continue to encourage classes to establish worm farms.	2009	No End Date (Continuous)
Recycle Programs	Ongoing/In Progress		Continue to sponsor recycle programs in the schools and in partnership with other community organizations.	Continue to encourage schools to participate in recycle programs.	2008	No End Date (Continuous)
Fort Nelson Arbour Day Event	Completed in 2011		Participated in Fort Nelson Arbour Day - planted trees at our board office.		2011	2011
Other Sustainability Actions						
Procurement (non-paper supplies)						
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress		Purchased green products.	Continue to purchase green cleaning products, disposable paper products and trash bags.	2009	No End Date (Continuous)
Commuting to and from home						
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress		Encourage staff to use alternative transportation methods.	Encourage staff to use alternative transportation methods.	2008	No End Date (Continuous)

**School District 81 - Fort Nelson
Greenhouse Gas Emissions by Source
for the 2011 Calendar Year (tCO₂e*)**



Total Emissions: 609

- 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 12:36 PM)

Total offsets required: **600**. Total offset investment: **\$15,000**. Emissions which do not require offsets: **9** **

*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.