

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

2010 Carbon Neutral Action Report

Executive Summary

School District #60 has been engaged in energy reducing initiatives since the early 1990's and continues to work toward carbon neutrality. This program was initiated with a complete district evaluation providing the framework for the development of an achievable and sustainable plan. We were recognized by B.C.Hydro in the educational class as a Power Smart winner in 2004. This plan was initiated by a complete lighting retrofit in all locations, installation of direct digital control of all heating plants and air distribution systems, installation of three solar walls providing pre-heating of outdoor air, elimination of user set thermostats and occupancy monitored requirements for outdoor air. This resulted in a 40% reduction of lighting loads and 20% reduction in fossil fuel loads using 2003 as the initial year. As well an Energy Manager position was created and electronic programs were installed to record and monitor energy usage.

Overviews

Actions Taken To Reduce Greenhouse Gas Emissions in 2010

- We have continued working with B.C. Hydro as a Power Smart Partner to reduce energy consumption
- Areas targeted this year include
 - Replacement of ten low efficiency furnace units with high efficiency units
 - Reducing water consumption through the installation of low flow sensor faucets and low consumption toilets
 - Replacement of inefficient hand dryers with high efficiency models
 - Direct digital control systems were recalibrated to ensure efficiency
 - Replacement of exit signs with self-powered units in to reduce electrical consumption.
 - District survey completed to replace older boilers as funding permits.
 - Replacement of 6 older buses with new units.

2010 Greenhouse Gas Emissions

Total emissions for all sources generated by School District #60 were 4145.20 CO₂e. As required by section 5 of the Carbon Neutral Government Regulation 1265.83 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.

Offsets Applied To Become Carbon Neutral In 2010

School District #60 has applied the balance of 2879.37 to become carbon neutral in 2010.

Looking Forward

The district understands and appreciates the need to become carbon neutral and is committed to working toward this objective. An education component for both staff and students is being considered for implementation, additional funding opportunities are being actively explored and ministry funding for facilities is being applied to energy reduction. High efficiency boiler units are presently being installed and engineering on lower performing sites is underway. District staff are being provided with instruction on facilities maintenance to increase efficiency and partnering with outside agencies to provide student involvement. Real time metering is also being considered as part of an instructional component for the student program.

Submitted By:



Doug Boyd

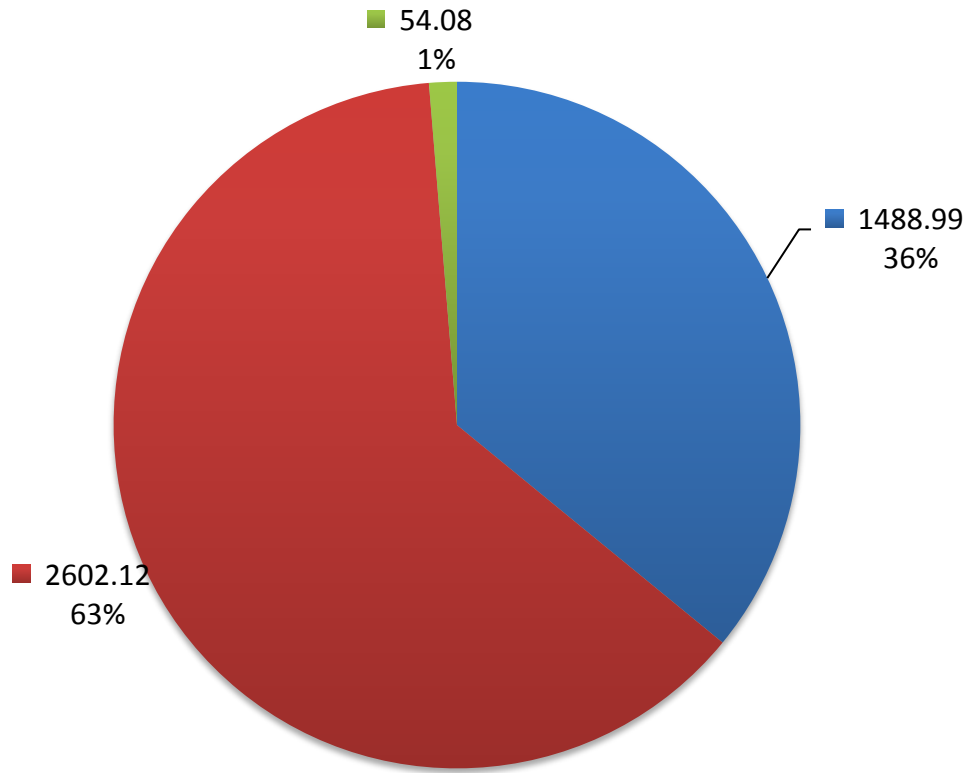
Secretary Treasurer, SD #60



“TOGETHER WE LEARN”

School District #60 Peace River North

Greenhouse Gas Emissions by Source for the 2010 Calendar Year (tCO₂e*)



Total Emissions: 4145.19

- 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: **2879.36**. Total offset investment: **\$71,984.00**. Emissions which do not require offsets: **1265.83** **

*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.

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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	50	% of vehicles are fuel- efficient models	replaced 6 busses with fuel efficient models	Target older bus replacement with fuel efficient models as funding permits.	2000	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	In Development	0	% of vehicles down-sized since start year indicated	continuation of "up sizing" smaller buses with larger busses making less trips.	continuation as need and funding allows	2009	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	regular maintenance and documentation of all district vehicles	continuation of preventative maintenance program	Started before 1995	No End Date (Continuous)
Behaviour change program							
Provide fleet driver training to reduce fuel use	Ongoing/In Progress	100	% of current drivers are trained	Yearly training sessions scheduled	on going professional development training	2007	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress			two fleet vehicles to transport personnel to rural schools	continue carpooling	2008	No End Date (Continuous)
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	In Development	5	% of staff ride bicycles or walk	provide more lockable and secure space to store bicycles	re-evaluate previous actions	2010	2011
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	In Development	40	% of retrofits since start year indicated had heating, cooling, and ventilation systems upgrades	Ongoing replacement of 10 older furnaces with energy efficient models	Finish replacement	2007	2013
Improve building insulation (including windows) during retrofits	In Development	15	% of retrofits since start year indicated had insulation improvements	replacement of windows in one older building	continue replacement starting with oldest building first as funding permits	2008	No End Date (Continuous)
IT power management							
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	10	% of computers shut down automatically outside of regular business hours	Evaluated and investigating Windows settings	Testing of Group Policy Objects to push changes to work stations. Evaluate Effectiveness of built in Windows settings. If not effective we will revisit software from vendor Faronics	2010	No End Date (Continuous)
Implement server virtualization	Ongoing/In Progress	75	% of servers have been virtualized since start year indicated	Continued to virtualize servers as appropriate	Continued to virtualize servers as appropriate	2009	No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	In Development	5	% reduction in printers, copiers, and/or fax machines since start year indicated	Did not use previously as only option was inkjet printing which was not financially/environmentally appropriate	Purchased several models of multifunctions for testing in schools and offices	2010	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
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Completed in 2010	100	% of devices have auto-sleep settings applied	Completed		2008	2010
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress			New models being purchased are Energy Star, other refurbished models may or may no be.	Continue to purchase new models that are energy star	2010	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	40	% of fridges are ENERGY STAR rated	All replacement appliances are required to be energy star models	ongoing requirement	2009	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	10	ongoing requirement	ongoing requirement	ongoing requirement	2009	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			Continuing reminders	continuation of reminders	2009	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	In Development	15	custodians close "moveable tackboards" over windows nightly. Exterior insulated shutters automatically close nightly	custodial reminders regarding blinds to be closed	continuation of reminders	2008	No End Date (Continuous)
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	In Development	5	% of total paper purchased contains 30% recycled content	Use of recycled paper is tried each year. However the paper so far has clogged up the printers and copiers.	Continued trial of recycled paper	2008	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	Completed		2008	2010
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	In Development	0	% of network printers have 'print and hold' settings applied	Purchased PaperCut printing system to start monitoring and testing web print and hold functions in schools	Implement in High School for live testing	2010	No End Date (Continuous)
Electronic media in place of paper							
Post materials online that were previously printed	Ongoing/In Progress			Pre-employment requirements are completed on-line. WHMIS, TDG, Harassment course are on-line training. Moodle	add Reporting Abuse course on-line	2008	No End Date (Continuous)
Behaviour change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	85	% of staff currently have received collaborative software training	Use of moodle, Elluminate, online collaborative tools	ongoing sessions	2008	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress	50	Board Meeting are paperless.	Distance Education moving to paperless	Encouraging use of collaborative software to make more meetings paperless	2008	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
Encourage re-use of scrap paper	Ongoing/In Progress		reusing paper to make notepads	scrap paper in classes used from recycle boxes	2007	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						
Make desktop web-cameras available to staff	Ongoing/In Progress	50 % of staff have access to a desktop web-camera	completed up to the 50% install	no further action	2009	2010
Behaviour change program						
Encourage staff to consider virtual attendance/presentation at events where possible	In Development		newsletters	continue	2009	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress		newsletters	continue	2009	No End Date (Continuous)
Education, Awareness, and Engagement						
Team-building						
Providing behaviour change education/training to teams (e.g., community-based social marketing)	In Development			encourage staff to attend community meetings	2011	No End Date (Continuous)
Staff Professional Development						
Support green professional development (e.g., workshops, conferences, training)	In Development			provide district workshops as part of Pro D	2011	No End Date (Continuous)
Staff awareness/education						
Provide green tips on staff website or in newsletters	In Development			include in wellness bulletins	2011	No End Date (Continuous)
Other Sustainability Actions						
Water conservation						
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	In Development			Replace water faucets as funding permits to sensor models	2011	No End Date (Continuous)
Put in place a potable water management strategy to reduce potable water demand of building-level uses such as cooling tower equipment, toilet fixtures, etc. and landscape features	Ongoing/In Progress		installation of low usage water toilets and low flow taps.	continue	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	Ongoing/In Progress		container recycling initiated in 2008	continue program	2008	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress		Procedures in place for the collection, storage and disposal of all hazardous waste.	continued	2006	No End Date (Continuous)
Procurement (non-paper supplies)						

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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
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	In Development		all waste collection bags are from recycled material	continue to purchase	2007	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	In Development			encourage reuse of materials	2011	No End Date (Continuous)
Indoor air quality						
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Completed in 2010		board guidelines requiring scent free wrkplace established in 2008		2008	No End Date (Continuous)
Incorporate low volatile organic compounds (VOCs) standards into procurement policy for products such as paints, carpets, and furniture	In Development			all replacement to be VOC free for all construction projects	2010	No End Date (Continuous)
Commuting to and from home						
Encourage commuting by foot, bicycle, carpool or public transit	In Development			staff bulletins via health and safety committee	2011	No End Date (Continuous)
Provide secure bicycle storage	In Development		have provided this in some locations as requests submitted	continue past practice	2009	No End Date (Continuous)