

School District No. 70 – 2010 Carbon Neutral Action Report

Executive Summary

The Alberni School District continues to embrace energy conservation measures, and is dedicated to reducing carbon emissions. We constantly maintain environmental consciousness as buildings are renovated and retrofitted. We continue to complete as many upgrades to lighting, mechanical and control systems as we can, within our budget constraints. We are actively planning for the replacement of the largest, most inefficient school in the District with a smaller Leeds Gold certified high school. Students and staff have taken many initiatives: reducing waste output, actively recycling, composting, purchasing green products, undertaking energy challenges, turning off and unplugging unneeded equipment & lights. We continue to upgrade our fleet, again within budget constraints. This year we managed to replace one cube van.

The environmental effects & benefits are being considered in all of our decisions and practices.

2010 Greenhouse Gas Emissions

Mobile fuel combustion:	296.51 tonnes of CO ₂ e
Stationary fuel combustion:	1,298.54 tonnes of CO ₂ e
Stationary combustions:	50.60 tonnes of CO ₂ e
Total emissions:	1,645.65 tonnes of CO ₂ e

Offsets Applied to Become Carbon Neutral in 2010

There was a total of 209.01 tonnes of CO₂e that did not require offsets. Of this total, 203.16 tonnes related to the mobile fleet, and 5.85 tonnes related to emissions from buildings.

Emissions Reduction Activities

Actions Taken to Reduce Greenhouse Gas Emissions in 2010

Actions taken include item upgrades / replacement, discontinuing use of rooms, employee training, and incorporating new technology / processes.

Plans to Continue Reducing Greenhouse Gas Emissions 2011-2013

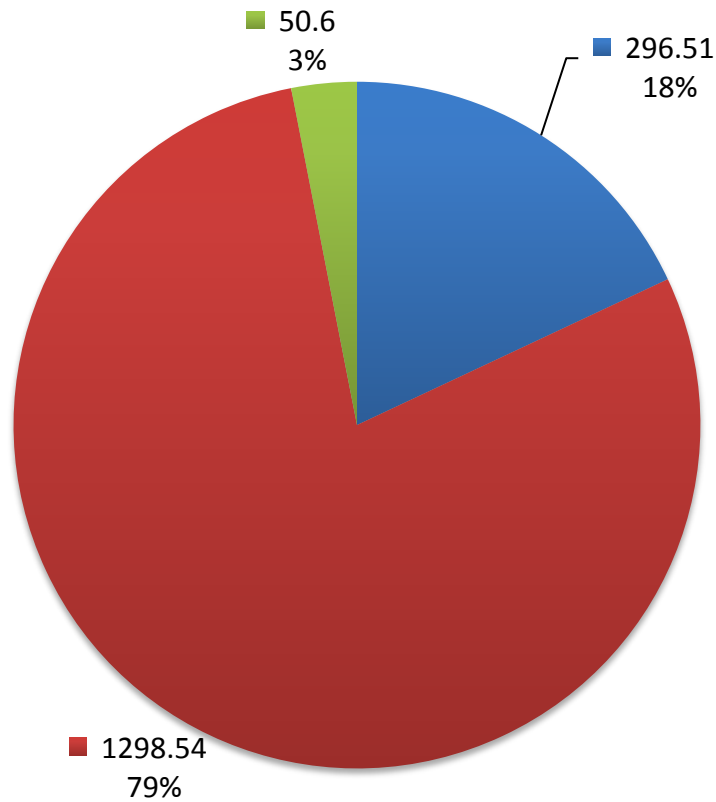
We plan to continue with actions as described above. In addition, we will be replacing our high school in September of 2012 with a new LEEDS Gold certified building.

One initiative we are exploring with the city of Port Alberni, and Catalyst Paper Corporation, is a district energy system plan. The district energy system would recover waste heat from the Catalyst Paper mill. Burning biomass produces the heat, which would be greenhouse gas-neutral. As such, the carbon tax and carbon offsets would not apply to this energy source.

Jerry Linning
Secretary Treasurer

School District 70 Alberni

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



Total Emissions: 1645.65

- 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: **1436.64**. Total offset investment: **\$35,916.00**. Emissions which do not require offsets: **209.01** **

*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	In Development				Purchase fuel-efficient vehicles as money becomes available	2011	2013
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	In Development				Purchase fuel-efficient vehicles as money becomes available	2011	2013
Perform regular fleet maintenance to improve fuel-efficiency	Ongoing/In Progress	100	% of vehicles are subject to regular maintenance for fuel efficiency	scheduled maintenance performed, as stipulated in manufacturer's specs.	scheduled maintenance performed, as stipulated in manufacturer's specs.	2009	No End Date (Continuous)
Replace small maintenance vehicles with more fuel-efficient models	Ongoing/In Progress	2	% of small maintenance vehicles are fuel-efficient	replaced one cube van with more efficient vehicle	Purchase more vehicles as money becomes available	2010	2013
Behaviour change program							
Provide fleet driver training to reduce fuel use	Completed in 2010	100	% of current drivers are trained	seminars for reinforcing training		2009	2010
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Planning/management							
Reduce office space (square meters) per employee	Ongoing/In Progress			closed unused space in schools and offices	closed unused space in schools and offices	2006	No End Date (Continuous)
Owned buildings							
Establish energy performance baseline for owned buildings	Completed in 2010			Using BC Hydro measurements		2009	2010
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress			Ongoing with construction of new high school. Engaged consulting firm to monitor LEED performance	Ongoing from 2010	2010	2012
Incorporate integrated design process into new construction or during renovations of owned buildings	Ongoing/In Progress			Process used in new high school construction	Ongoing from 2010	2010	2012
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Ongoing/In Progress			replaced refrigerant in 20% of our buildings	replace refrigerant as required / when money is available	2009	No End Date (Continuous)
Complete energy retrofits on existing, owned buildings	In Development				awaiting approval of capital requests; will undertake retrofits when requests approved	2011	No End Date (Continuous)
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress			Upgraded one school	Upgrade 3 more schools	2002	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress			nothing in 2010	upgrade as retrofits done	2007	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
Upgrade/adjust control systems during retrofits	Ongoing/In Progress			two school done	3 more schools planned	2006	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress			nothing in 2010	improve as retrofits are done	2007	No End Date (Continuous)
IT power management							
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress			TPM program monitors school computers	Continue upgrading computers; install software on new installs	2008	No End Date (Continuous)
Implement server virtualization	Ongoing/In Progress	70	% of servers have been virtualized since start year indicated	Began virtualization of servers in school district	All servers that can be virtualized will be completed by 2013	2010	2013
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	100	% of computers have auto-sleep settings applied	Completed applying auto-sleep settings	Will set up all new computers and monitors as they are installed	2008	No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	In Development			Study undertaken with Ricoh	Begin installing multi-function devices per recommendations of Ricoh study	2010	2013
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Ongoing/In Progress			Continued applying auto-sleep settings to various devices	All new devices will have auto-sleep settings applied	2008	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress			Begin replacing with ENERGY STAR models	Continue upgrading to ENERGY STAR models	2010	2013
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress			3 new fridges purchased	replace as needed/when money available	2010	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			3 replaced	replace as needed/when money available	2010	No End Date (Continuous)
Replace desk lamp incandescent bulbs with compact fluorescent (CFL) bulbs or source more efficient desk lamps for future purchases	Ongoing/In Progress			replaced 10% of existing bulbs	replace as needed/when money available	2010	2013
Behaviour change program							
Help staff reduce personal energy use through "workstation tune-ups"	Ongoing/In Progress			Provided ongoing education to staff	Provide ongoing education to staff	2009	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress			Provided ongoing education to staff	Provide ongoing education to staff	2009	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress			Provided ongoing education to staff	Provide ongoing education to staff	2009	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress			Provided ongoing education to staff	Provide ongoing education to staff	2009	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress			Provided ongoing education to staff	Provide ongoing education to staff	2009	No End Date (Continuous)
Encourage use of stairs instead of elevators	Ongoing/In Progress			Provided ongoing education to staff	Provide ongoing education to staff	2009	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
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress		Provided ongoing education to staff	Provide ongoing education to staff	2009	No End Date (Continuous)
Promote hot water conservation	Ongoing/In Progress		Provided ongoing education to staff	Provide ongoing education to staff	2009	No End Date (Continuous)
Supplies (Paper)						
Printer/document settings						
Switch networked printers and photocopiers to automatic double-sided	In Development		Study undertaken with Ricoh	Depends on Ricoh study findings	2010	2013
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	In Development		Study undertaken with Ricoh	Depends on Ricoh study findings	2010	2013
Reduce default margin size in standard document templates (e.g., letters, briefing notes, forms, etc.)	In Development		Study undertaken with Ricoh	Depends on Ricoh study findings	2010	2013
Electronic media in place of paper						
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress		Researched district portal concept, SharePoint	District Portal going live in July 2011. Exploring use of Sharepoint as a back end to portal.	2010	No End Date (Continuous)
Use electronic document library for filing common documents	Ongoing/In Progress		Researched district portal concept, SharePoint	District Portal going live in July 2011. Exploring use of Sharepoint as a back end to portal.	2010	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress		Researched district portal concept, SharePoint	District Portal going live in July 2011. Exploring use of Sharepoint as a back end to portal.	2010	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Completed in 2010		Changed over from paper pay stubs to electronic payroll notification	Looking into software for switching to electronic timesheets	2010	No End Date (Continuous)
Behaviour change program						
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress		IT staff underwent district portal, SharePoint training	Training for staff in May 2011	2010	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress		IT staff underwent district portal, SharePoint training	Training for staff in May 2011	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 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						
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress		Using Elluminate for web-conferencing	On going use of Elluminate or comparable software	2010	No End Date (Continuous)
Behaviour change program						
Train staff in web-conferencing	Ongoing/In Progress		Staff training	New staff training	2010	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress		Scheduling events that have web-conferencing capabilities; giving employees the time and tools to attend virtually	Scheduling events that have web-conferencing capabilities; giving employees the time and tools to attend virtually	2009	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		Individual schools have taken initiative at their sites and have organized teams	More of the same	2009	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	Ongoing/In Progress		Schools provide training	Schools provide training	2009	No End Date (Continuous)
Staff Professional Development						
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress		Staff training provided	Staff refreshers / training will be provided	2010	No End Date (Continuous)
Staff awareness/education						
Provide education to staff about the science of climate change	Ongoing/In Progress		Schools have established "green teams" to educate both staff / students	Continuing with school based education programs	2008	No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress		Schools' "green teams" have initiated special days (Fridays) to reduce electricity. They are tracking electricity usage year over year	Continuing with school based education programs	2008	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress		"Green teams" from schools update websites / newsletters regularly	Continuing with school based education programs	2008	No End Date (Continuous)
Client/public awareness/education						
Provide education to clients/public about the science of climate change	Ongoing/In Progress		Part of teacher education program	Part of teacher education program	2010	No End Date (Continuous)
Provide education to clients/public about the conservation of water, energy, and raw materials	Ongoing/In Progress		Part of teacher education program	Part of teacher education program	2010	No End Date (Continuous)
Provide green tips on client/public website or in newsletters	Ongoing/In Progress		Part of teacher education program	Part of teacher education program	2010	No End Date (Continuous)
Other Sustainability Actions						

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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
Water conservation						
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress		replaced a number of fixtures	replace fixtures as required / when money is available	2006	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		installed low flow toilets, timed flush valves, water meters on boiler feeds	install / replace as required / when money is available	2006	No End Date (Continuous)
Procurement (non-paper supplies)						
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress		product evaluation started	complete evaluation and implement program	2010	2013
Building construction, renovation, and leasing						
Incorporate lifecycle costing into new construction or renovations	Ongoing/In Progress		incorporated in new high school construction	will be incorporated into all new construction / renovations	2009	No End Date (Continuous)
Indoor air quality						
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Ongoing/In Progress		voluntary scent-free policy instituted	continue to educate staff on policy	2010	No End Date (Continuous)
Commuting to and from home						
Offer staff a compressed work week	Completed in 2010		Offered to staff and rejected		2010	2010