

School District 70(Alberni) - 2009 Carbon Neutral Action Report

Executive Summary

School District 70(Alberni) has been very proactive with various initiatives with the ultimate goal of becoming carbon neutral. School District 70 through funding from the Annual Facilities Grant, has embarked on a ten (10) year plan for mechanical upgrades, DDC installations and or upgrades, and is in the process of organizing an Energy Audit through BC Hydro.

Overviews

Actions Taken to Reduce Greenhouse Gas Emissions in 2009

Replaced one large and inefficient cast iron hot water boiler with two (2) high efficiency condensing boilers. Initiated Phase II of the School District's anti-idling campaign. Upgraded the DDC equipment in three (3) facilities to ensure the optimal performance from the entire heating/mechanical systems. Initiated the installation of current transducers for monitoring of the lighting loads and to control the lighting on a specified schedule.

Plans to Continue Reducing Greenhouse Gas Emissions 2010 – 2012

Purchase and install multi-technology ceiling sensors with all digital architecture for lighting control in classrooms, offices, gymnasiums and multi-purpose rooms. Determine the feasibility of the Leviton dimming Mini Z system in all teaching spaces to maximize energy savings as it will make full use of available daylight by dimming all the lighting in the classroom.

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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 12/31/09)	Performance to Date (as of 12/31/09)		Steps Taken in 2009	Steps Planned for 2010 -2012	Start Year	End Year
Mobile Fuel Combustion (Fleet and other mobile equipment)							
Vehicle fuel efficiency							
Replace vehicles with more fuel-efficient models	In Development			Light duty vans, trucks and a car were evaluated for fuel efficiency	The heavy duty trucks and tractors to be evaluated for fuel efficiency	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	All fleet vehicles are serviced every six (6) months or 5,000 kilometres, which ever comes first.	Continue with the fleet maintenance/service plan established in 2008	2008	No End Date (Continuous)
Behaviour change program							
Provide fleet driver training to reduce fuel use	In Development			Trained two (2) transportation personnel in "The Thinking Driver" program. All transportation personnel have been instructed by the trained SD70 personnel.	All SD70 fleet drivers will receive the "The Thinking Driver" training.	2011	No End Date (Continuous)
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Ongoing/In Progress	50	All transportation personnel aware of the anti-idling policy	All grounds crew personnel have been introduced to the anti-idling policy and are complying.	Remaining SD70 fleet drivers will be instructed on the School Board policy regarding anti-idling.	2011	No End Date (Continuous)
Other Mobile Fuel Combustion Actions							
Grounds crew personnel instructed on the School District's anti-idling policy and how the policy applies to the entire mobile fleet, including off road tractors, chain saws, etc.	Ongoing/In Progress	65	All Grounds crew personnel instructed on the SD70 Anti-idling policy	All grounds crew personnel have been introduced to the anti-idling policy and are complying.	Remaining SD70 relevant personnel will be instructed on the School Board policy regarding anti-idling.	2011	No End Date (Continuous)
Grounds crew instructed to abide by the anti-idling policy for all off road mobile equipment	Complete			All grounds crew personnel have been introduced to the anti-idling policy and are complying.		2009	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Owned buildings							
Establish energy performance baseline for owned buildings	In Development			Baseline being developed in concert with the SmartTool	Completed the energy performance baseline	2009	No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress	0	% of owned buildings are certified LEED NC Gold or LEED NC Platinum	The new Secondary School, to be built in 2010, will be built to the LEED NC Gold Certification	Construction of the new Secondary School is scheduled to start in May, 2010.	2010	2012
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	20	% of owned buildings have undergone energy retrofits since start year indicated	1 Elementary School, 1 Middle School and 1 Secondary School have had new DDC systems installed . 2 Elementary Schools have had their old cast iron boilers replaced with high efficiency condensing boilers with high efficiency cast iron boilers as back-up.	3 Elementary School and 1 Middle School will have their old cast iron boilers replaced with high efficiency condensing boilers with high efficiency cast iron boiler for back-up.	2008	2012
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	20	% of retrofits (captured above) had heating, cooling, and ventilation systems upgrades	1 Elementary School, 1 Middle School and 1 Secondary School have had new DDC systems installed . 2 Elementary Schools have had their old cast iron boilers replaced with high efficiency condensing boilers with high efficiency cast iron boilers as back-up.	3 Elementary School and 1 Middle School will have their old cast iron boilers replaced with high efficiency condensing boilers with high efficiency cast iron boiler for back-up.	2008	2012

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Upgrade lighting systems during retrofits	Complete	95	% of retrofits (captured above) had lighting systems upgrades	All fluorescent lighting has been upgraded from T12's to T8 lighting		2000	2009
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	30	% of retrofits (captured above) had control system upgrades or adjustments	1 Elementary School, 1 Middle School and 1 Secondary School have had new DDC systems installed .	3 Elementary Schools and 1 Middle School will have new DDC systems installed	2008	2012
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	25	% of retrofits (captured above) had insulation improvements	Contract being drqawn up between	4 Elementary Schools and 1 Middle School scheduled to have exterior cladding repalced c/w insulation upgrade and all windows will be replaced with low-e thermopane glass windows.	2006	2012
Install an on-site renewable energy demonstration project	Ongoing/In Progress	5	% of retrofits (captured above) had on-site renewable energy components	Initiated contract between SolarBC, Terratek Energeny Solutions Inc. and SD70 to install 4 solar collectors at the Wickaninnish Community School in Tofino for the solar hot water system.	Finalize the scope of work, sign the contract, and have the solar hot water system at the Wickaninnish Community School installed.	2009	2010
IT power management							
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	25	% of computers shut down automatically outside of regular business hours	Installed Faronics PC Power Management software on school based computer labs	Complete the installation of the Faronics PC Power Management software on all school based computer labs and all stand alone console computers	2009	2012
Implement server virtualization	Ongoing/In Progress	30	% of servers have been virtualized since start year indicated	School based servers have been virtualized	All SD70 servers to be virtualized	2008	2012
Apply auto-sleep settings on computer monitors and CPUs	Complete	100	% of computers have auto-sleep settings applied	All school based computer labs have had their auto-sleep settings applied		2008	2012
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	50	% of computers are ENERGY STAR rated	As funding is obtained for computers to be replaced, they are all replaced with Energy Star models.	As funding is obtained for computers to be replaced, they are all replaced with Energy Star models.	2005	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	20	% of fridges are ENERGY STAR rated	As funding is obtained for fridges to be replaced, they are all replaced with Energy Star models.	As funding is obtained for fridges to be replaced, they are all replaced with Energy Star models.	2004	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	25	% of other appliances (i.e. washers, dryers, etc.) are ENERGY STAR rated	As funding is obtained for other appliances to be replaced, they are all replaced with Energy Star models.	As funding is obtained for other appliances to be replaced, they are all replaced with Energy Star models.	2005	No End Date (Continuous)
Behaviour change program							
Help staff reduce personal energy use through "workstation tune-ups"	In Development			A School District strategy is being formulized for "workstation tuneups"	A School District strategy is being formulized for "workstation tuneups"	2009	2011
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	50	All staff are reminded to unplug electrical equipment or switch off power bars when not inuse at all staff meetings	All staff are reminded to unplug electrical equipment or switch off power bars when not inuse at all staff meetings	All staff are reminded to unplug electrical equipment or switch off power bars when not inuse at all staff meetings	2008	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress	50	All staff are asked to close blinds at the end of the work day to reduce the heating/cooling demands at staff meetings	All staff are asked to close blinds at the end of the work day to reduce the heating/cooling demands at staff meetings	All staff are asked to close blinds at the end of the work day to reduce the heating/cooling demands at staff meetings	2008	No End Date (Continuous)

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Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress	50	All staff are reminded to use the air dry settings on dishwashers at staff meetings	All staff are reminded to use the air dry settings on dishwashers at staff meetings	All staff are reminded to use the air dry settings on dishwashers at staff meetings	2008	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	In Development			A School District strategy is being formulized for providing tips to staff on how to save energy while working outside of the regular business hours.	A School District strategy is being formulized for providing tips to staff on how to save energy while working outside of the regular business hours.	2010	2012
Provide reminders for turning off lights (e.g., signs, stickers, messages)	In Development			A School District strategy is being formulized for providing reminders for turning off lights	A School District strategy is being formulized for providing reminders for turning off lights	2010	2012
Promote hot water conservation	Ongoing/In Progress	50	All staff are reminded to conserve water, both hot and cold at staff meetings.	All staff are reminded to conserve water, both hot and cold at staff meetings.	All staff are reminded to conserve water, both hot and cold at staff meetings.	2009	No End Date (Continuous)
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	55	% of total paper purchased contains 30% recycled content	In January, a Ministry purchasing standard was established for paper (30% minimum post consumer recycled content) SMARTTool reported that in 2009, 80% of copy paper purchased contained 30% post consumer recycled content.	2010 - Adhere to the established recycled content standard	2010	No End Date (Continuous)
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	25	% of network printers or photocopiers are set to automatic double-sided	All new multi-function devices installed had automatic double-sided set as the default setting	2010 - 2012 - All new multi-function devices installed will have the automatic double-sided set as the default setting	2008	No End Date (Continuous)
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	Ongoing/In Progress	45	% of network printers have 'print and hold' settings applied	All network printers had "print & hold" settings applied as the default setting.	2010-2012 - All network printers had "print & hold" settings will be applied as the default setting.	2009	No End Date (Continuous)
Reduce default margin size in standard document templates (e.g., letters, briefing notes, forms, etc.)	In Development			The default margin size in standard document templates will be reduced in 2009	2010-2012 - All the default margin sizes in standard document templates will be reduced.	2009	2011
Electronic media in place of paper							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	In Development			Evaluate collaborative software for electronic editing in 2009	2010 - 2012 - Complete the evaluation and install the collaborative software for electronic editing.	2010	2012
Post materials online that were previously printed	Ongoing/In Progress	60	Materials posted online	Materials previously printed are posted on the SD70 website in 2007	Materials previously printed are posted on the SD70 website in 2010 - 2012	2008	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Ongoing/In Progress	25	% of Staff on the electronic payroll notification system	2008 - All excluded staff were switched to an electronic payroll notification system in place of paper pay stubs	2010 - 2012 - CUPE & ADTU employees will be switched to the electronic payroll notification system in place of the current paper pay stubs.	2008	2012
Behaviour change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	10	% of staff currently have received collaborative software training	Staff trained to use collaborative software for electronic editing in 2009	2010 - 2012 - All staff will be trained to use collaborative software for electronic editing.	2009	2012
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress	30	% of paperless meetings	2009- All staff encouraged to hold paperless meetings	2010 - 2012 - All staff expected to be holding paperless meetings	2009	2012

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Encourage re-use of scrap paper	Ongoing/In Progress	100	% of staff encouraged to re-use scrap paper	2009 - All staff encouraged to re-use scrap paper	2010 - 2012 - Reinforce the re-use of scrap paper with all staff	2009	No End Date (Continuous)