



The Board of Education of School District #28

2009 Carbon Neutral Action Report

Executive Summary

The Board of Education began initial planning stages to undertake reduction of greenhouse gas (GHG) emissions from operations in the later part of 2009. Early policy regarding Energy Management Conservation was reviewed and the recommendation to form a committee to identify a strategic approach to the Board of Education. The Committee is scheduled to meet in early 2010.

Overviews

Actions Taken to Reduce Greenhouse Gas Emissions in 2009

- ◆ The Board of Education was visionary in executing one of the first bio-energy wood pellet boiler systems in North America, and a quote from our formal announcement is below:

“Ventek Energy Systems and Quesnel School District #28 are excited to announce the completion of a bio-energy wood pellet boiler system at Nazko Valley Community Center and School near Quesnel, BC.

*This system is one of the first of its kind in North America. It allows for a complete conversion of the facility from fossil fuel heating to bioenergy. A combination of European state of the art wood pellet burning technology, with the need to reduce the carbon footprint and reduce energy costs of this school facility made this project a natural fit..... Use of the wood pellet system is expected to **reduce CO2 emissions by approximately 66 tons per year** and save the school district over \$30,000/yr in energy costs.”*

This initiative was very rewarding with respect to both, CO2 emissions and financial savings in energy costs.

- ◆ The Board of Education also replaced T12 bulbs with T8 bulbs at two of our elementary schools to reduce energy usage. Electronic ballasts work best with T8 bulbs for maximum energy saving. The energy effectiveness of the T8 bulb is due to being better able to convert incoming electricity to the proper amount needed to power the bulbs leading to less wasted energy.
- ◆ Upgraded the mechanical system (heating, cooling, and ventilation) with an energy retrofit at Baker Elementary School.

Operational Changes in 2009

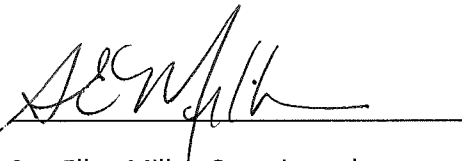
Plans to Continue Reducing Greenhouse Gas Emissions 2010 – 2012

The Board of Education plans to:

1. Replace the antiquated HVAC system at Correlieu Secondary School with a new energy efficient system
2. Continuing purchasing Energy Star appliances and computers when replacing units
3. Implement the use of 30% post-consumer recycled paper, move to duplex printing and encourage paper-less meetings and electronic presentations
4. Replace T12 bulbs with T8 bulbs in four more district owned buildings
5. Install real-time metering system in one district owned building
6. Complete installation of "Idle free" signage at all district site locations
7. Remove one old inefficient vehicle and replace with "right-sized" and fuel efficient vehicle
8. Work with all locations to determine current efforts towards carbon neutrality

Further, it is expected that the Climate Action Committee will submit to The Board of Education a set of focused recommendations and those recommendations will begin to be implemented in this timeframe.

Respectfully submitted,



Sue-Ellen Miller, Superintendent



Teri Stoneman, Secretary-Treasurer



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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	Ongoing/In Progress	10	% of vehicles are fuel- efficient models		Any replacements will be fuel-efficient	2008	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	10	% of vehicles down-sized since start year indicated		It is our expectation that we will replace an additional 10% of our fleet	2008	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	Vehicles are serviced every 5,000 kilometers	Continue regular servicing	1998	No End Date (Continuous)
Behaviour change program							
Provide fleet driver training to reduce fuel use	Complete	100	% of current drivers are trained	No new actions taken		2007	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	60	% of schools have signage and compliance	In 2009, we completed an additional 40% of schools with signage	We expect to complete the final 40% of schools with signage	2007	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Planning/management							
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	80	% of buildings have a real time metering system installed	In 2009 we upgraded the system in Parkland Elementary School	It is our expectation that we will upgrade the Bus Garage and if current Honeywell equipment fails, we will look to replace these systems.	2004	No End Date (Continuous)
Owned buildings							
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Ongoing/In Progress				As required	2007	No End Date (Continuous)
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	80	% of owned buildings have undergone energy retrofits since start year indicated	We completed one energy retrofit at Voyageur Elementary School	We expect that we will receive Capital funding to upgrade Maple Drive Junior School and Correlieu Senior Secondary	2000	No End Date (Continuous)
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	100	% of retrofits (captured above) had heating, cooling, and ventilation systems upgrades	We completed one retrofit at Voyageur Elementary School	We expect that we will receive Capital funding to upgrade Maple Drive Junior School and Correlieu Senior Secondary	2000	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	45	% of retrofits (captured above) had lighting systems upgrades	We did T12 to T8 upgrades at Carson, Kersley, Baker, Pinecrest and Dragon Elementary Schools	We hope to complete Parkland, The District Office, Lakeview and Red Bluff Schools during this timeframe	2007	2012

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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
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	0	% of retrofits (captured above) had control system upgrades or adjustments	These were not affordable	No plans to date	1998	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	65	% of retrofits (captured above) had insulation improvements	We completed Dragon Lake and Lakeview Schools	No plans to date	2003	No End Date (Continuous)
Install an on-site renewable energy demonstration project	Ongoing/In Progress	5	% of retrofits (captured above) had on-site renewable energy components	Nazko Elementary installation of Pellet Boiler	We expect that we will receive Capital funding to upgrade Maple Drive Junior School and Correlieu Senior Secondary	2008	No End Date (Continuous)
IT power management							
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	90	% of computers shut down automatically outside of regular business hours	Installed software	Monitor systems and fix problems	2007	No End Date (Continuous)
Implement server virtualization	Ongoing/In Progress	10	% of servers have been virtualized since start year indicated	Began virtualization where appropriate	Watch for further opportunities	2008	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	90	% of computers have auto-sleep settings applied	Apply settings to computers	Monitor systems and fix problems	2008	No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	In Development			Began setup of copiers to receive faxes and scan documents	Continue as new copiers are purchased	2008	2012
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Ongoing/In Progress	90	% of devices have auto-sleep settings applied	Purchased printers with auto-sleep enabled	Continue as new printers are purchased	2007	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	90	% of computers are ENERGY STAR rated	New purchases are energy star rated.	Purchase only energy star rated computers	2008	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	60	% of fridges are ENERGY STAR rated	Continue to replace old fridges with new energy star rated fridges	Continue to replace old fridges with new energy star rated fridges	1998	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	60	% of other appliances are ENERGY STAR	Continue to replace old appliances with new energy star rated appliances	Continue to replace old appliances with new energy star rated appliances	1998	No End Date (Continuous)
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	In Development				We plan to begin using 30% post-consumer recycled paper throughout our organization	2010	No End Date (Continuous)
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress			Not all network printers will duplex; of those, some default to double sided	Buy only duplexing printers, set all to default to double sided.	2007	No End Date (Continuous)
Electronic media in place of paper							

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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
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	In Development		Set up Groupwise, web site and mailing lists	Set up Wiki and encourage users to move away from paper	2009	2012
Use electronic document library for filing common documents	In Development		Are using web site for this purpose	Watch for additional opportunities.	2007	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress		Encourage all staff to use electronic presentations rather than paper	Encourage all staff to use electronic presentations rather than paper	2007	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Complete		All employees receive pay slips through email		2008	2010
Behaviour change program						
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	In Development			Encourage staff to share and edit online	2009	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress		Began discussion of paperless meetings.	Provide web sites for paperless board meetings. Encourage all staff to hold paperless meetings. Install projectors.	2009	No End Date (Continuous)