

Carbon Neutral Action Report School District #5, Southeast Kootenay

Executive Summary

In consideration of the Carbon Action Report and new legislation towards carbon neutrality, it has become apparent that School District #5 (Southeast Kootenay) has already been moving towards more environmentally responsible actions. Our transportation, maintenance, and district office have undertaken initiatives, as have all of our schools on a variety of levels. There are specific challenges in our school district as it is geographically expansive and its location necessitates the need for higher carbon consumption to compensate for cold winter weather and snow related difficulties. There is still room for improvement, and we feel that through the creation and support for our district Environment Committee, that we are moving in the proper direction. To address mobile fuel combustion concerns, our transportation department has undertaken initiatives such as DriveSMART driver training, regular maintenance, anti-idling, and school bus modifications such as hydrogen generators to improve fuel economy and reduce emissions. Our manager of facilities is encouraging videoconferencing training for all custodial staff. As well, we have replaced older inefficient district vehicles with smaller, newer, more fuel efficient vehicles. Stationary fuel combustion and electricity concerns have been addressed through lighting retrofits and the use of CFL's, through the purchasing of newer, more energy efficient computers and portable laptops in place of desktops, and through the increased use of videoconferencing. As well, there are number of school based anti-idling programs in partnership with Wildsite. Several schools have automated blinds to reduce heat loss and custodial staff are being encouraged to shut off building lights when not in use. Our technology department has set up power saving options on school computers district wide. To reduce the consumption of paper and goods, School District #5 has incorporated the use of collaboration and video conferencing software (First Class, Meeting Manager, and Elluminate), have increased the use of laptop computers, and have set up tender package guidelines that ensure that all paper towel and toilet paper be made from 100% recycled paper. When faced with school closures, reusable furniture, supplies and equipment is distributed as needed. In the social realm of education and administration, travel is a very real component of day to day business, especially in a geographically expansive district. Bussing creates challenges in our rural district. To reduce travel, technicians and district staff are encouraged to carpool and schools have encouraged "walk to school" programs. As well, teleconferencing and videoconferencing are being used more often when teams need to come together. Employee engagement is an area in which global change can occur. The creation of a district wide Environment Committee has been our first step towards major change. The district committee has been meeting to create policy and to address legislative changes towards carbon neutrality. Future expectations of the Environment Committee is to make recommendations to district management on the 6 major themes of the Carbon Action Report. Most notably on the 3 objectives indicated herein. Sustainability actions, also global in nature, have been undertaken in the use of microfiber cleaning supplies to reduce chemical and potentially environmentally damaging products. School based environmental clubs have initiated recycling programs, composting programs and even the creation of nature gardens. Environmental stewardship is an area we expect to encourage in our staff and students.

Objectives

1. Fuel reduction

Our geographically expansive and rural communities within School District #5 create the necessity for higher fuel consumption than might be seen in smaller, urban districts. We see this as an opportunity for significant carbon reduction with smaller, simplistic, and realistic change.

Reduction

Education is historically a paper intensive endeavour. Through the use of technology and behavioural change of staff and students, we hope to see a reduction in supply usage with the added benefit of cost savings.

3. Environmental Stewardship

It is well understood that the most influential and capable individuals in addressing environmental change are our students. Therefore, environmental stewardship is an area in which we will be placing resources and energy. Students have the most to gain from reducing carbon emissions and through the use of school based environmental programs and incentives, we expect School District #5 to be a leader in environmental change.

2. Paper

Part 1: Actions Taken to Reduce Greenhouse Gas Emissions in 2008

Overview

To address mobile fuel combustion concerns, our transportation department has undertaken initiatives such as DriveSMART driver training, regular maintenance, anti-idling, and school bus modifications such as hydrogen generators to improve fuel economy and reduce emissions. Our manager of facilities is encouraging videoconferencing training for all custodial staff. As well, we have replaced older inefficient district vehicles with smaller, newer, more fuel efficient vehicles.

Stationary fuel combustion and electricity concerns have been addressed through lighting retrofits and the use of CFL's, through the purchasing of newer, more energy efficient computers and portable laptops in place of desktops, and through the increased use of videoconferencing. As well, there are a number of school based anti-idling programs in partnership with Wildsite. Several schools have automated blinds to reduce heat loss and custodial staff are being encouraged to shut off building lights when not in use. Our technology department has set up power saving options on school computers district wide.

To reduce the consumption of paper and goods, School District #5 has incorporated the use of collaboration and video conferencing software (First Class, Meeting Manager, and Elluminate), have increased the use of laptop computers, and have set up tender package guidelines that ensure that all paper towel and toilet paper be made from 100% recycled paper. When faced with school closures, reusable furniture, supplies and equipment is distributed as needed.

Sustainability actions, also global in nature, have been undertaken in the use of microfiber cleaning supplies to reduce chemical and potentially environmentally damaging products. School based environmental clubs have initiated recycling programs, composting programs and even the creation of nature gardens. Environmental stewardship is an area we expect to encourage in our staff and students.

1.1 Mobile Fuel Combustion			
Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Replaced # of TYPE OF VEHICLE with MORE EFFICIENT VEHICLE/Hybrid	In Progress	2 vehicles (District staff) have been changed to more fuel efficient vehicles. Replaced Ford Half tonne Pickup with Honda Civic. Full size Chevrolet Van with Pontiac Vibe.	
Provided driver training to reduce fuel use	Complete	In-service provided with Drive Smart to bus drivers.	Professional Development for Maintenance staff. Watched and discussed "Inconvenient Truth" video
Initiated new fleet maintenance program (could include – changing filters, checking tire pressure, regular check-ups)	Complete	Regular maintenance schedule. Using metalon fuel additive to improve mileage. Hydrogen generators installed on two busses.	
Established anti-idling behaviour change program (e.g. signs, stickers, messages)	In Progress	School based anti-idling programs. Drive Smart in-service. Partnerships with Wildsite and HasteBC.	
Encouraged car pooling in fleet vehicles	In Progress	District computer technicians are encouraged to carpool when travelling to Elk Valley	
Encouraged use of public transit/active transportation	In Progress	Encouraged at school level	
Encouraged alternatives to travel in fleet vehicles – bicycles, scooters, electric carts	In Progress	Encouraged at school level	
Changed from gas to electric lawn maintenance equipment	In Progress	Under consideration	
Changed to manual lawn and yard maintenance equipment	In Progress		
Established travel reduction goals	In Progress	Manager of Facilities is encouraging videoconferencing training for custodial staff.	
Adopted a travel policy	In Progress		
1.2 Stationary fuel combustion and electricity			
Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Undertaken workstation tune-ups to help staff understand what they can do to reduce personal energy use	In Progress		
Supplied power bars – to turn off power to non-essential items when not in use (e.g. phone chargers)	In Progress	Bars supplied	
Undertaken Monitor turn-off challenge	In Progress	Computers have been set up with energy management	
Replaced # computers with EnergyStar models	In Progress	250-300 new computers purchased in 2008, with energy efficiencies	
Asked staff to close blinds daily	In Progress	Kootenay Orchards and Sparwood Secondary have automatic blinds. Parkland and Laurie Middle Schools have some automated blinds.	
Used air dry setting on dishwashers	In Progress		

Encouraged staff to use stairs	In Progress	Only two schools have elevators installed. Use is low.
Turned off lights in unused rooms	In Progress	Encouraged. Custodians instructed through Powersmart to turn off lights in the evenings.
Replaced Refrigerators (EnergyStar rated appliance)	In Progress	One elementary school that we are aware of has purchased an energy efficient fridge.
Replaced other appliances (with EnergyStar rated appliance)	In Progress	
Installed multi-function devices (and removed stand-alone printers/faxes)	In Progress	Board office working towards multifunction devices. A number of offices now linked to central machine.
Replaced standard bulbs with CFLs	In Progress	~75% completed
Installed motion activated lights	In Progress	Board Office bathrooms. Sparwood Secondary has installed.
Undertaken lighting retrofit	In Progress	~75% completed
Implemented server virtualization	In Progress	Under Consideration
Utilized desk-top power management settings on computer	In Progress	Many classroom computers and all teaching computer labs in the district have power management
Initiated corporate computer shut-down/wake-up for maintenance	In Progress	
Unplugged unused equipment	In Progress	
Applied for LEED existing building rating	In Progress	
Undertaken building energy audit at LOCATION(s)	In Progress	

1.3 Supplies

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Committed to use 30% recycled paper	In Progress	Under Consideration for School Policy	
Committed to use 100% recycled paper	Complete	Paper towel and toilet paper tenders must meet 100% recycled paper guidelines.	
Initiated automatic double sided printing	In Progress	encouraged through user choice.	
Changed document template margins	In Progress		
Committed to hold paperless meetings	In Progress	Piloting paperless meetings with School Trustees.	
Developed document library (online and one printed copy) for large documents	In Progress	District Policy Manual and Long Range Facility Use Plan housed on district webpage.	
Used collaborative software to edit on-line	In Progress	FirstClass email, document sharing, meeting software. Meeting Manager.	
Re-used non-confidential scrap paper	Complete	Several schools and district personnel currently reuse non-confidential paper.	

Used laptops/tablets	In Progress	School itinerants were provided with laptops (Speech Language Pathologists, Hard of Hearing teacher, etcetera). Mobile Laptop Labs in Amy Woodland Elementary, Isabella Dicken Elementary, Fernie Secondary, Laurie Middle School, Mount Baker Secondary, Sparwood Secondary, and Parkland Middle School.
Restructured a process to use less paper	In Progress	
Actions on non-paper related supplies:		
Purchased cradle to cradle goods	In Progress	
Chose "Green" items from Distribution Centre	In Progress	
Encouraged re-use of furniture and equipment	Complete	Maintenance Department always encourages reuse. When schools have been closed, equipment distributed as needed

1.4 Travel

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Set a X% Travel reduction goal	In Progress		
Trained staff in the use of Live Meeting (or other desktop collaborative software)	In Progress	Eliminate in use.	
Installed Video Conferencing facilities	In Progress	In every community (each secondary school and Board office has capabilities).	
Initiated Travel Policy	In Progress		
Mandated car pooling to government meetings	In Progress		
Supported alternative travel (bike/skateboard/walk/transit) for meetings	In Progress	Some teachers walk to work, student "Walk to School Days" are undertaken at various schools.	

1.5 Employee Engagement

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Provided climate change education	In Progress	Transportation staff shown "Inconvenient Truth"	
Provided conservation education	In Progress	District works in conjunction with conservation organizations such as Wildsite and Columbia Basin (CBEEN), which provide children's environmental education.	
Held contests to change behaviour/make pledges	In Progress		
Held contests/support to generate ideas	In Progress		
Developed Green Teams	In Progress	Creation of SD5 Environment Committee	

Supported Green Teams (resources)	In Progress	Creation of SD5 Environment Committee. Financially supported Leadership BC as Gold Sponsor (provided staff release for one member) and financially sponsored Green Project "Greening the BC Winter Games".
Provided green tips		Bus drivers: anti-idling, conference attended by Transportation Foreman, 10 minute automatic bus shut-off in Western portion of district.
Supported professional development	In Progress	Paid to attend conference-Transportation Supervisor. Hosted webcast and paid applicable staff to attend.
Added green work goal to performance management	In Progress	

1.6 Sustainability Actions (others)

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Took water conservation measures – low flow showers or toilets, fix leaks	In Progress	6 litre toilets installed in Sparwood Secondary School. Reducing flow levels in school toilets without tanks under consideration.	
Ran dishwasher only when full	In Progress		
Reduced/replaced bottled water with filtered or refrigerated water	In Progress	Board office meetings have changed from bottled water to cooler.	
Improved recycling measures	In Progress	School based programs. Partnership with Regional District and Waste Management contractor to have Large yellow recycle bins at each school and maintained (collected).	
Supported composting	In Progress	Composting at some elementary schools	
Used re-usable dishes		Staff encouraged to use ceramic dishes. All Styrofoam/paper removed from staff areas.	
Purchased green cleaning products	In Progress	Microfiber cloths and mops district wide, less use of industrial cleaners.	
Used green (low-e paints)	In Progress	Change to moderate VOC level paints.	
Supported sustainable procurement practices	In Progress	Tendering process revealed 30% increase in cost, still under review.	
Adopted low-carbon contracting practices	In Progress		

Part 2: Plans to Continue Reducing Greenhouse Gas Emissions 2009 -- 2011

Overview

Employee engagement is an area in which global change can occur. The creation of a district wide Environment Committee has been our first step towards major change. The district committee has been meeting to create policy and to address legislative changes towards carbon neutrality. Future expectations of the Environment Committee is to make recommendations to district management on the 6 major themes of the Carbon Action Report. Most notably on the 3 objectives indicated herein.

1. Fuel reduction

Our geographically expansive and rural communities within School District #5 create the necessity for higher fuel consumption than might be seen in smaller, urban district. We see this as an opportunity for significant carbon reduction with smaller, simplistic, and realistic change.

2. Paper Reduction

Education is historically a paper intensive endeavour. Through the use of technology and behavioural change of staff and students, we hope to see a reduction in supply usage with the added benefit of cost savings.

3. Environmental Stewardship

It is well understood that the most influential and capable individuals in addressing environmental change are our students. Therefore, environmental stewardship is an area in which we will be placing resources and energy. Students have the most to gain from reducing carbon emissions and through the use of school based environmental programs and incentives, we expect School District #5 to be a leader in environmental change. Also under consideration is a partnership with BC Hydro to address energy use through the employment of an Energy Manager.

2.1 Mobile Fuel Combustion

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Replace # of TYPE OF VEHICLE with MORE EFFICIENT VEHICLE/Hybrid	Planned	Continual with new staff (DriveSMART). Handbooks to be delivered as needed		continual
Provide driver training to reduce fuel use	Planned	Continue discussion with district counterparts to improve.		continual
Initiate new fleet maintenance program (could include – changing filters, checking tire pressure, regular check-ups)	Planned	Transportation Foreman to initiate formal anti-idling goal/policy.		2010
Establish anti-idling behaviour change program (e.g. signs, stickers, messages)	Planned	Continued as is		continual
Encourage car pooling in fleet vehicles	planned	Continued as is		continual
Encourage use of public transit/active transportation	In Progress			
Encourage alternatives to travel in fleet vehicles – bicycles, scooters, electric carts	Planned	Under Consideration		2010
Change from gas to electric lawn maintenance equipment	In Progress			
Change to manual lawn and yard maintenance equipment	In Progress			
Other: (Please enter any items not included in the above list)	Planned	Improve fuel economy		2009/2010

2.2 Stationary Fuel Combustion (including electricity)

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Undertake workstation tune-ups to help staff understand what they can do to reduce personal energy use	In Progress			
Supply power bars – to turn off power to non-essential items when not in use (e.g. phone chargers)	In Progress	Shut-off training needs to occur		
Undertaken Monitor turn-off challenge	In Progress			
Replace # computers with EnergyStar models	In Progress			
Ask staff to close blinds daily	In Progress			
Use air dry setting on dishwashers	In Progress			
Encourage staff to use stairs	In Progress			
Turn off lights in unused rooms	Planned	Custodial Memo		2009
Replace Refrigerators (EnergyStar rated appliance)	In Progress			
Replace other appliances (with EnergyStar rated appliance)	In Progress			
Install multi-function devices (and remove stand-alone printers/faxes)	In Progress			
Replace standard bulbs with CFLs	In Progress			
Install motion activated lights	In Progress	Under Consideration		2010
Undertake lighting retrofit	In Progress	25% left		2010
Implement server virtualization	In Progress			
Utilize desk-top power management settings on computer	In Progress			
Initiate corporate computer shut-down/wake-up for maintenance	In Progress			
Unplug unused equipment	In Progress			
Apply for LEED existing building rating	Planned	On any new buildings		
Undertake building energy audit at LOCATION(s)	Planned	Applying for energy audits for schools. F.J. Mitchell Elementary, Fernie Maintenance Shop, Fernie Learning Center, Grasmere Elementary, Rocky Mountain Elementary		2009
Initiate or complete a building energy retrofit	In Progress			

2.3 Supplies

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Commit to use 30% recycled paper	Planned		Under Consideration	2009
Commit to use 100% recycled paper	In Progress			
Initiate automatic double sided printing	In Progress			
Change document template margins	In Progress			
Commit to hold paperless meetings	Planned	Piloting Meeting Manager / Elluminate use		2009
Develop document library (online and one printed copy) for large documents	In Progress			
Use collaborative software to edit on-line	In Progress	Continued First Class use		2009
Re-use non-confidential scrap paper	In Progress			
Use laptops/tablets	Planned	School Trustees to have laptops		2009
Restructure a process to use less paper	In Progress			

Purchase cradle to cradle goods	In Progress			
Choose "Green" items from Distribution Centre	In Progress			
Encourage re-use of furniture and equipment	In Progress	Ongoing		ongoing

2.4 Travel

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Set a X% Travel reduction goal	Planned		Under Consideration	
Train staff in the use of Live Meeting (or other desktop collaborative software)	In Progress			
Install Video Conferencing facilities	In Progress			
Initiate Travel Policy	In Progress			
Mandate car pooling to government meetings	Planned	Piloting Meeting Manager / Eliminate use		
Support alternative travel (bike/skateboard/walk/transit) for meetings	In Progress			

2.5 Employee Engagement

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Provide climate change education	planned	Manager of Facilities encouraging staff		2010
Provide conservation education	Planned	Continued partnership with environmental		Ongoing
Hold contests to change behaviour/make pledge	In Progress			
Hold contests/support to generate ideas	In Progress			
Develop Green Teams	Planned	Environment committee to develop recommendations for district managements towards Employee Engagement Initiatives.		
Support Green Teams (resources)	Planned	Fund Environment Committee work		2009
Provide green tips	In Progress			
Support professional development	Planned	Ongoing, as per existing protocol		Ongoing
Add a green work goal to performance management	In Progress			

2.6 Sustainability Actions (others)

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Take water conservation measures – low flow showers or toilets, fix leaks	Planned	Will consider reducing flush volume in tankless toilets.		
Run dishwasher only when full	In Progress			
Reduce/replace bottled water with filtered or refrigerated water	In Progress			
Improve recycling measures	Planned	Under Consideration by SD5 Environment Committee		2009
Support composting	In Progress	Under Consideration by SD5 Environment Committee		2009
Use re-usable dishes	In Progress			
Purchase green cleaning products	Planned	Microfiber mops and cloths used by custodial staff.		
Use green (low-e paints)	In Progress	Researching (Lower VOC paints do not support durability).		2009
Support sustainable procurement practices	In Progress			
Adopt low-carbon contracting practices	In Progress			