

Carbon Neutral Action Report School District No. 40 (New Westminster)

Executive Summary

THE DISTRICT HAS WORKED WITH BC HYDRO, TERASEN GAS, NATURAL RESOURCES CANADA (NRCAN) & THE MINISTRY OF EDUCATION TO PLAN AND TAKE ACTION ON UPGRADING FACILITIES.

USING AN ENERGY MANAGER ON A CONTRACT BASIS TO MONITOR AND RECOMMEND A PLAN FOR MOST EFFICIENT ENERGY UPGRADES.

PREVIOUS ENERGY PROJECTS:

- Solar walls at Lord Tweedsmuir School
- Lighting upgrades at Connaught Heights School

SCHOOLS/DEPARTMENTS HAVE INCORPORATED RECYCLING, COMPOSTING AND WASTE REDUCTION PROGRAMS WITH INCREASING STAFF & STUDENT PARTICIPATION.

EXAMPLES OF EDUCATIONAL PROGRAMS THAT ARE CURRENTLY BEING OFFERED IN SOME OF OUR SCHOOLS INCLUDE:

- environmental groups
- students maintaining gardens
- recycling
- replacing appliances with energy efficient models
- efficient use of paper, e.g., double siding, electronic memos, using RISO machine
- "Walk To School" breakfast
- salmonid release program
- using public transit for field trips
- "Pitch In" program
- cleaning up community

Objectives

UPGRADES OF LIGHTING SYSTEM FROM METAL HALIDS TO T8 SYSTEMS

UPGRADE OF CONTROLS TO ENHANCE BUILDING PERFORMANCE

BOILER REPLACEMENTS TO HIGH EFFICIENCY UNITS

WATER TANK REPLACEMENT TO HIGH EFFICIENCY UNITS

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

Overview

SOLAR WALLS INSTALLED IN FOUR LOCATIONS TO CAPTURE FREE HEATING

BOILER REPLACEMENTS TO HIGH EFFICIENCY UNITS

LIGHTING UPGRADES - ONGOING REPLACEMENT ie., EMERGENCY LIGHTING, EXIT LIGHTING , CFL, T8 & T5 TECHNOLOGY UPGRADES

UPGRADE AND REFINEMENT OF DDC CONTROL SYSTEMS TO ENHANCE BUILDING PERFORMANCE

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	complete		Changed two vehicles from gasoline to bio-diesel
Initiated new fleet maintenance program (could include – changing filters, checking tire pressure, regular check-ups)	in progress		Set up regular oil change procedure through auto shops
Established anti-idling behaviour change program (e.g. signs, stickers, messages)	in progress		Anti-Idling signs going up at key locations
Established travel reduction goals	complete		Regular schedule for efficient site maintenance

1.2 Stationary fuel combustion and electricity

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Replaced Refrigerators (EnergyStar rated appliance)	in progress		All replacements are energy star rated appliances
Replaced other appliances (with EnergyStar rated appliance)	in progress		Ongoing program as required
Replaced standard bulbs with CFLs	in progress		
Installed motion activated lights	in progress		Key locations; more to follow
Undertaken lighting retrofit	complete		Metal halide convert to T8 technology, T12 to T8
Unplugged unused equipment	in progress		
Undertaken building energy audit at LOCATION(s)	in progress		District audits done for 4 of 12 schools & new incentive programs
Initiated or completed a building energy retrofit	in progress		On-going heating & electrical
Boiler retrofits	in progress		
Water tank upgrades	in progress		
Tune up of control systems	in progress		

1.3 Supplies			
Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Committed to hold paperless meetings	in progress		Board meeting material available electronically
Used laptops/tablets	in progress		done on a volunteer basis
Actions on non-paper related supplies:			
Encouraged re-use of furniture and equipment	in progress		
Smart Boards	in progress		
White Boards	in progress		
District website information available on-line	in progress		
1.4 Travel			
Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Mandated car pooling to government meetings	in progress		Car pool to meetings where appropriate
Supported alternative travel (bike/skateboard/walk/transit) for meetings	in progress		Bike racks at all schools
Teleconferences, webinars	complete		
Walking school bus - working with schools on a volunteer basis	in progress		
Walk to Special Events where appropriate, e.g., May Day	in progress		
1.5. Employee Engagement			
Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Work from home, remote locations	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		
Ran dishwasher only when full	in progress		
Improved recycling measures	in progress		increased program with City
Purchased green cleaning products	complete		converted district cleaning program to enviro-friendly program
Used green (low-e paints)	in progress		
Part 2: Plans to Continue Reducing Greenhouse Gas Emissions 2009 -- 2011			
Overview	TO INITIATE A MEETING WITH BC HYDRO/POWERSMART WITH A VIEW TO POSSIBLY IMPLEMENTING SUSTAINABLE ENERGY INITIATIVES, EDUCATIONAL INSTRUCTION, ESTABLISHING ENERGY SUSTAINABILITY POLICIES, ETC.		

2.1 Mobile Fuel Combustion

VEHICLE REPLACEMENT LOOKING TOWARDS BEST TECHNOLOGY FOR EFFICIENCIES

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Initiate new fleet maintenance program (could include – changing filters, checking tire pressure, regular check-ups)	in progress		expand present plan through preventative maintenance	
Change from gas to electric lawn maintenance equipment	in progress		Continue to reassess options with the intent to use best practices	
Change to manual lawn and yard maintenance equipment	in progress		Continue to reassess options with the intent to use best practices	

2.2 Stationary Fuel Combustion (including electricity)

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Ask staff to close blinds daily	in progress			
Turn off lights in unused rooms	in progress			
Replace Refrigerators (EnergyStar rated appliance)	in progress			
Replace other appliances (with EnergyStar rated appliance)	in progress			
Replace standard bulbs with CFLs	in progress			
Install motion activated lights	in progress			
Undertake lighting retrofit	in progress			
Unplug unused equipment	in progress			
Apply for LEED existing building rating	in progress			
Undertake building energy audit at LOCATION(s)	in progress			
Initiate or complete a building energy retrofit	in progress			

2.3 Supplies

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Develop document library (online and one printed copy) for large documents	in progress		Yes, have begun implementation of a document management system	
Restructure a process to use less paper	planned		Plans to implement no timesheets, electronic pay statements, T4's, T4A's, electronic funds transfer for accounts payable, purchase cards, etc.	
Actions on non-paper related supplies:				
Encourage re-use of furniture and equipment	in progress			

2.4 Employee Engagement

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Provide climate change education	in progress			
Provide conservation education	planned			
Hold contests to change behaviour/make pledge	in progress			
Hold contests/support to generate ideas	in progress			
Develop Green Teams	in progress			
Support Green Teams (resources)	in progress			
Provide green tips	in progress			
Add a green work goal to performance management	in progress			

2.5 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	in progress			
Run dishwasher only when full	in progress			
Improve recycling measures	in progress			
Use re-usable dishes	in progress			
Purchase green cleaning products	in progress			
Use green (low-e paints)	in progress			