

## Carbon Neutral Action Report School District No. 28 (Quesnel)

### Executive Summary

The Board of Education of School District #28 Quesnel, with a 2008/09 Student Population of 3629.5 FTE and 24 service locations, adopted a policy for "Energy Management Conservation" which accepted the responsibility of ensuring that every effort was made to conserve energy and natural resources, while exercising sound financial management. The specific procedures undertaken to attain this policy included maintenance of accurate records of energy consumption and cost, improving the efficiency of our lighting, implemented HVAC start-up/setbacks for heating/ air-conditioning and shifted to purchasing EnergyStar equipment and from local suppliers. These procedures have made steps toward reducing our greenhouse gas emissions.

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

#### Overview:

School District #28 has undertaken the following initiatives over the period beginning January 1, 2008 through December 31, 2008 of the following: **1.** Installed energy efficient ballasts in our larger sites - QSS, CSS, Lakeview, Baker and the District Admin Office. **2.** Upgraded the HVAC systems at most of our sites. We now control the upgraded sites with a DDC or computerized control system to maximize efficiency. We have 7 sites remaining to upgrade to DDC. **3.** Replaced Windows at Carson, Baker, Red Bluff, Bouchie Lake, Lakeview and Dragon Lake with a lo-e with argon. **4.** As we replace roofs, we now upgrade the insulation as well. **5.** We recycle cardboard and fluorescent tubes at all sites. **6.** We are using green chemicals to clean our schools, with the exception of toilet bowl cleaner and degreaser.

#### 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	1 Hybrid Bus	Working out the software bugs with the vendor - IRL
Provided driver training to reduce fuel use	In Progress	100% Transportation EE's 30 Participate	90% change in observed driving habits
Initiated new fleet maintenance program (could include – changing filters, checking tire pressure, regular check-ups)	In Progress	Service buses every 200 hours - wear metals (ppm) and oil condition particle count (ct/ml)	Operational efficiencies/increased wear life of buses
Established anti-idling behaviour change program (e.g. signs, stickers, messages)	Complete	Buses idle is set to auto shut down after 15 minutes	
Encouraged car pooling in fleet vehicles	In Progress	When possible travel to same site, pool fleet vehicle for most trades	
Encouraged use of public transit/active transportation	In Progress	Align bus routes with public transportation for route maximization	
<b>Other: (Please enter any items not included in the above list)</b>			

Retrofit components on older Bus Fleet	In Progress	Cummins CCV and Doc mufflers on 8 units
Reduce/Eliminate unnecessary Bus runs	In Progress	Implemented parent call-in procedure to cancel bus run when students not attending school

### 1.2. Stationary fuel combustion and electricity:

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Supplied power bars – to turn off power to non-essential items when not in use (e.g. phone chargers)	In Progress	Staggered/timers on block heaters	
Replaced # computers with Energy Star models	In Progress	75% completed	
Used air dry setting on dishwashers	In Progress	As time permits to turnover dishes	
Turned off lights in unused rooms	Completed		
Replaced Refrigerators (Energy Star rated appliance)	In Progress	As equipment is replaced, new standard purchased	
Replaced other appliances (with Energy Star rated appliance)	In Progress	As equipment is replaced, new standard purchased	
Replaced standard bulbs with CFLs	In Progress	Almost complete	
Installed motion activated lights	In Progress	Installation of motion timers in all rooms in most sites	
Undertaken lighting retrofit	Completed		
Implemented server virtualization	In Progress	Presently 25 virtual servers have been implemented	
Initiated corporate computer shut-down/wake-up for maintenance	Completed	Software shuts computers off at 6:00 pm daily	

### 1.3. Supplies:

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Initiated automatic double sided printing	In Progress	Where equipment available	
Committed to hold paperless meetings	In Progress	Move to agenda less meetings	
Used collaborative software to edit on-line	In Progress	MS Audit software tracks edit on-line to keep track of changes	
Re-used non-confidential scrap paper	In Progress	Recycle all paper	
<b>Actions on non-paper related supplies:</b>			
Chose "Green" items from Distribution Centre	In Progress	Switched to biodegradable garbage bags	
Encouraged re-use of furniture and equipment	In Progress	Repainting old desks, replacing table tops and seats	

#### 1.4. Employee Engagement

Action	Action Taken	Outcome/Performance Measure	Notes Clarifying Action Taken
Provided climate change education			
Provided conservation education	In Progress	Staff meetings recycling initiatives/education	
<b>Other: (Please enter any items not included in the above list)</b>			
Initiated recycling	In Progress	Recycling boxes for plastics, bottles, magazines	

#### 1.5. 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	Showers have been deactivated in Elementary Schools	
Ran dishwasher only when full	In Progress		
Reduced/replaced bottled water with filtered or refrigerated water	In Progress	Use pitchers and glasses, reducing water bottles	
Improved recycling measures	In Progress	Old equipment and computers are taken to metal and computer recycling facilities	
Supported composting	In Progress	Various schools implemented	
Used re-usable dishes	In Progress	Dishes/glasses purchased to eliminate throw-away	
Purchased green cleaning products	In Progress	95% complete	
Used green (low-e paints)	Completed		

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

##### Overview:

The Quesnel Board of Education's goal is to do our part in meeting the Government mandate of achieving net zero GHG emissions by 2010 and every year thereafter. Our emissions are created from our school buildings, our bus and maintenance fleets, our procurement practices and our district travel. We can, by leading by example and providing our employees with tangible changes, significantly reduce the GHG emissions produced by our School District. We will achieve this change by conserving energy, decreasing costs and developing a successful approach to addressing climate change.

To meet our carbon neutral commitment, the district will create policy, develop specific plans and committees to achieve the required reductions in GHG emissions. We will take action by beginning to accurately measure and publicly report on our plans and actions. We will fully offset any emissions that cannot be reduced. We are taking concrete actions to change our behaviour beginning with the development of a vision and "Green" Action plan.

**2.1. Mobile Fuel Combustion:**

We are currently partnering with a company to replace our propane heating system at one of our elementary schools, with state of the art wood pellet burning technology. We will be one of the first in North America to introduce this technology and we expect to significantly reduce CO2 emissions.

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Provide driver training to reduce fuel use	Planned	Maintenance and Computer Technicians	Drive Smart Training	2009

**2.2. Stationary Fuel Combustion (including electricity):**

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Undertake lighting retrofit	Planned	Change T-12 to T-8 bulbs		2009/10
<b>Other: (Please enter any items not included in the above list)</b>				
Replace bio-mass boiler	In progress	Replace existing propane fuel to pellet	Save 60 tons of carbon	2009
HVAC Upgrade	In progress	Install unconventional system	Save 50% on natural gas and hydro bills	2009

**2.3. Employee Engagement**

Action	Action Planned	Outcome/Performance Measure	Notes Clarifying Action Taken	Timeframe
Provide conservation education	Planned	Offer education sessions on Pro-D days to orientate staff regarding conservation education		2009/10
Provide green tips	Planned	Implement new section of Update 28 Newsletter to be used for communicating "Green Tips"		2009/10

