

#### **Executive Summary**

School District No. 67 (Okanagan Skaha) serves the communities of Penticton, Summerland, Naramata, and Kaleden in the south Okanagan region of British Columbia. School District No. 67 is signatory to and supports the Climate Action Charter in the province of British Columbia. The School District supports and practices sustainable initiatives to conserve energy and resources with the goal to reduce carbon emissions, reduce utility costs, and promote a cleaner environment.

While the School District does not have any accounts with BC Hydro and therefore cannot access funding available to most other districts in the province to hire an Energy Manager, proactive operating procedures help reduce energy consumption in the District.

District schools continue to practice the sustainable principles introduced over the past three years through a contract with Destination Conservation.

Themes for the three years of the program are energy in the first year, water in the second year, and waste avoidance for the third year.



#### **Overviews**

#### 2010 Greenhouse Gas Emissions

In 2010, operations in School District No. 67 (Okanagan Skaha) produced a total of 1,933.49 carbon dioxide equivalent tonnes (CO<sub>2</sub>e) of emissions. The school bus fleet produced 119.26 tonnes of CO<sub>2</sub>e and those emissions do not require offset, leaving a total of 1,814.23 tonnes of CO<sub>2</sub>e requiring purchase of offsets. The majority, 1,553.98 tonnes of CO<sub>2</sub>e, were derived from heating and lights for school buildings. The balance was derived from vehicle fleet fuel, paper supplies, and fugitive emissions calculated from use of refrigeration equipment used to cool school buildings.

#### Offsets Applied to Become Carbon Neutral in 2010

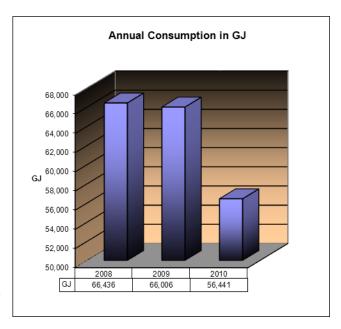
In order to become carbon neutral in 2010, School District No. 67 (Okanagan Skaha) was required to purchase a total of 1,814.23 tonnes of CO<sub>2</sub>e from Pacific Carbon Trust at a cost of \$25 per tonne of CO<sub>2</sub>e. Total cost for purchase of these carbon offsets for 2010 was \$45,355.75 for School District No. 67 (Okanagan Skaha).

#### **Actions Taken to Reduce Greenhouse Gas Emissions in 2010**

The School District implemented the plan to lower the heat point setting to 20°C and raise the cool point setting to 25°C in all facilities.

The new Penticton Secondary School geothermal heating system reduced utility consumption considerably during 2010.

These and other District initiatives reduced the annual utility consumption for natural gas and electricity by 15% from 2008.



**Operational Changes in 2010** 

The centralized shutdown for all School District computers and other electronic

devices was completed in 2010. This management system ensures that all

electronic equipment is shut down overnight and on weekends when not in use.

As well, all computer monitors have been converted from CRT to LCD.

Anti-idling programs were implemented at some District schools as a

continuation of the program started in 2009.

Plans to Continue Reducing Greenhouse Gas Emissions 2011—2013

Where practicable, recommendations of the study to reduce transportation costs

will be implemented.

The District will continue to request minor capital project funding from the Ministry

of Education to upgrade school HVAC systems to modern, efficient, and reliable

systems.

Staff and students will continue to be encouraged to car pool, use bicycles, or

walk to school whenever possible.

Plans to review service fleet transportation costs will be undertaken with the view

to reduce mileage travelled and size of some District maintenance vehicles.

The new data center in Summerland will be more energy efficient and be able to

in the future take advantage of integrated energy systems such as geothermal.

Ron Shongrunden

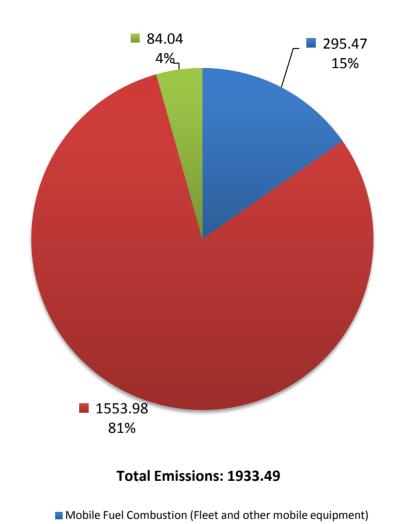
Secretary-Treasurer

June 20, 2011

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### School District No. 67 (Okanagan Skaha)

Greenhouse Gas Emissions by Source for the 2010 Calendar Year (tCO<sub>2</sub>e\*)



#### Offsets Applied to Become Carbon Neutral in 2010

■ Stationary Fuel Combustion and Electricity (Buildings)

■ Supplies (Paper)

Total offsets purchased: 1814.23. Total offset investment: \$45,355.75. Emissions which do not require offsets: 119.26 \*\*

<sup>\*</sup>Tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) is a standard unit of measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

<sup>\*\*</sup> Under the Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.

### **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 12/31/10)		Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Mobile Fuel Combustion (Fleet and other mobile equipr	ment)						
Vehicle fuel efficiency							
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	0	% of vehicles are fuel- efficient models	Budget request	Capital funding requested for next buses	2012	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	5	% of vehicles down-sized since start year indicated	Two smaller trucks	Continue process	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	Continue to service all district vehicles at regularly scheduled intervals	Continue process	2005	No End Date (Continuous)
Replace small maintenance vehicles with more fuel-efficient models	Ongoing/In Progress	50	% of small maintenance vehicles are fuel-efficient	Replacement vehicles are more fuel-efficient	Continue process	2008	No End Date (Continuous)
Behaviour change program			ı				
Provide fleet driver training to reduce fuel use	Ongoing/In Progress	100	% of current drivers are trained	Annual training provided	Continue process	2008	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	10	% of parking lots signed	Continue anti-idling practice for school district service vehicles	Encourage schools to introduce anti-idling for parking lots	2009	2012
Encourage carpooling in fleet vehicles	Ongoing/In Progress			Transportation assistance parents are encouraged to carpool when driving students to school	Continue process	2008	No End Date (Continuous)
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	Ongoing/In Progress			City buses used on routes for students within walk limits to get to school; secure bike racks provided at all schools	Continue process	2008	No End Date (Continuous)
Other Mobile Fuel Combustion Actions							
Conservation Destination programs in schools to create awareness and conserve energy	Ongoing/In Progress	100	% completed	Maintain Conservation Destination initiatives at all schools	Continue process	2007	No End Date (Continuous)
Established travel reduction goals	Ongoing/In Progress			Reduced travel budgets for administration	Continue reduced travel budget	2009	No End Date (Continuous)
Adopted a travel policy	In Development			Procedures require minimized travel arrangements	Continue to develop policy	2009	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Em	issions (Buildings)						
Planning/management							
Enrol in a building energy benchmarking program (e.g., GREEN UP)	Ongoing/In Progress			Enrolled in 2005; provided data as required throughout 2009	Continue to provide data as required by the GREEN UP	2005	No End Date (Continuous)
Owned buildings							
Establish energy performance baseline for owned buildings	In Development			Seeking funding; SD67 is not serviced by BC Hydro so does not have access to Utility Manager funding accorded other districts	Press FortisBC for Utility Manager funding	2010	No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	In Development			Have requested a major capital project, but has not been approved	Will use LEED standards for major capital projects	2011	No End Date (Continuous)
Incorporate integrated design process into new construction or during renovations of owned buildings	Ongoing/In Progress		% of buildings built or renovated since start year indicated used the integrated design process	No projects in design at this time	Will use integrated design process for new projects	2011	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Ongoing/In Progress	100	% of buildings have refrigerant management	Refrigerant management system in place	Continuing process	2010	No End Date (Continuous)
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	90	% of owned buildings have undergone energy retrofits since start year indicated	Need minor capital funding approval for project	Project request to be submitted	2010	No End Date (Continuous)
Retrofitting owned buildings							

Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	% of retrofits since start year indicated had heating, cooling, and ventilation systems upgrades	Remaining HVAC systems were reviewed for replacement; requested capital projects	Continuing review	2010	No End Date (Continuous)
Upgrade lighting systems during retrofits	Completed in 2010	% of retrofits since start year 100 indicated had lighting systems upgrades	All schools completed		2006	2010
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	% of retrofits since start year 100 indicated had control system upgrades or adjustments	All retrofitted schools upgraded controls	Minor project requests will be made for two small elementary schools that require retrofit	2010	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Completed in 2010	% of retrofits since start year 100 indicated had insulation improvements	Capital budget requested for additional improvements		2006	No End Date (Continuous)
IT power management						
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	% of computers shut down 80 automatically outside of regular business hours	Installation of power management software	Continue to implement adding additional devices	2009	2012
Implement server virtualization	Ongoing/In Progress	% of servers have been 10 virtualized since start year indicated	Did research and piloted the implementation	Continue to implement	2009	2012
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	% of computers have auto-sleep settings applied	Did research and piloted the implementation	Continue to implement	2009	2012
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Ongoing/In Progress	% reduction in printers, copiers, 10 and/or fax machines since start year indicated	Did research and piloted the implementation	Continue to implement adding additional devices	2009	2012
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Ongoing/In Progress	% of devices have auto-sleep settings applied	Did research and piloted the implementation	Continue to implement	2009	2012
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	% of computers are ENERGY STAR rated	Did research and piloted the implementation	Continue to implement	2009	2012
Appliances and electronic devices						
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress	% of fridges are ENERGY STAR rated	New purchases are all ENERGY STAR rated; reduced energy consuption	Continue to implement adding additional devices	2007	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	% of other appliances are ENERGY STAR models	Did research and piloted the implementation	Continue to implement adding additional devices	2007	No End Date (Continuous)
Replace desk lamp incandescent bulbs with compact fluorescent (CFL) bulbs or source more efficient desk lamps for future purchases	Completed in 2010	% of desk lamps are more efficient	T8 fluorescent tubes with electronic ballasts and CFLs in pot lights		2009	No End Date (Continuous)
Behaviour change program						
Help staff reduce personal energy use through "workstation tune-ups"	Ongoing/In Progress	% of current staff have 70 completed a workstation tune- up	Did work station tune-ups	Continue to implement	2009	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress		Sent e-mail to all staff and informed principals	Continue to implement	2009	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress		Sent e-mail to all staff and informed principals	Continue to implement	2009	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress		Sent e-mail to all staff and informed principals	Continue to implement	2009	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress		Direct staff to energy management websites	Continue to implement	2009	No End Date (Continuous)
Encourage use of stairs instead of elevators	Ongoing/In Progress		Elevator keys provided for wheelchair access only	Continue to implement	2009	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress		Custodians trained; occupancy sensors at some locations	Continue to implement	2008	No End Date (Continuous)

Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Promote hot water conservation	Ongoing/In Progress		Direct staff to energy management websites	Continue to implement	2009	No End Date (Continuous)
Other Stationary Fuel Combustion and Electricity Actions						
Installed motion activated lights	Ongoing/In Progress	30 % installed	Motion activated lights and security cameras as part of capital plan	Continue to implement	2009	No End Date (Continuous)
Unplug unused equipment	Ongoing/In Progress	% of redundant equipment unplugged	Reduce energy consumption	Continue to implement by unplugging redundant equipment	2009	No End Date (Continuous)
Vending machine Energy Misers	Ongoing/In Progress	% completed with existing 100 vending machines; ongoing for new vending machines	Procurement documents require all vending machines to have motion detectors so power is off when no movement is detected	Continue to implement	2005	No End Date (Continuous)
Undertaken monitor turn-off challenge	Ongoing/In Progress	% completed for existing monitors	Remotely shut off from central data centre; continue practice with all new monitors	Comtinue to implement	2005	No End Date (Continuous)
Supplies (Paper)						
Paper Type						
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	% of total paper purchased contains 30% recycled content	Converted custodial supplies and monitoring prices and testing performance of bond paper	Continue to purchase	2006	No End Date (Continuous)
Purchase 100% post-consumer recycled paper	Ongoing/In Progress	% of total paper purchased contains 100% recycled content	Converted custodial supplies and monitoring prices and testing performance of bond paper	Continue to purchase	2006	No End Date (Continuous)
Printer/document settings						
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	% of network printers or photocopiers are set to automatic double-sided	Paper consumption - new printers purchases with double-sided capacity and existing printer settings changed to double-sided	Continue to purchase	2006	No End Date (Continuous)
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	Completed in 2010	% of network printers have 'print and hold' settings applied	All settings done through central data centre		2006	No End Date (Continuous)
Electronic media in place of paper						
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	In Development		Server built; some training completed	Implementation	2011	No End Date (Continuous)
Use electronic document library for filing common documents	Ongoing/In Progress	% of electronic documents available through website	Number of on-line documents increased	Implementation	2011	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress	% of materials are available online	Number of on-line documents increased	Continue to implement	2002	No End Date (Continuous)
Behaviour change program						
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	% of staff currently have received collaborative software training	Converted home learning to Moodle	Continue to implement	2009	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress		Trustees have shown leadership with laptops at Board meetings; technology used for video and audio conferencing; implementing SmartBoard technology in schools to replace paper	Continue to implement	2008	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress		Paper consumption - paper and containers available for reuse and recyle; advertise to schools surplus materials for reuse	Continue to implement	2006	No End Date (Continuous)
Other Paper Supplies Actions						
Used laptops and tablets	Ongoing/In Progress		One to one program for schools, principals and special needs; school district provides used laptops to general public	Continue to implement	2006	No End Date (Continuous)
Restructured a process to use less paper	Ongoing/In Progress		Software implemented for document management and work orders	Ongoing process	2006	No End Date (Continuous)
Purchased cradle to cradle goods	Ongoing/In Progress		Bulk order of supplies direct shipped	Ongoing process	2000	No End Date (Continuous)
Encouraged re-use of furniture and equipment	Ongoing/In Progress		Centralized purchasing and inventory allows for reuse of equipment, furniture, computers, etc.	Ongoing process	2000	No End Date (Continuous)

Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Page monitor program	Ongoing/In Progress		Purchased electronic periodical subscriptions; purchasing electronic textbooks for math program	Ongoing process	2008	No End Date (Continuous)

### **Actions to Reduce Provincial Emissions and Improve Sustainability**

The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the *Greenhouse Gas Reduction Targets Act.* Public sector organizations can optionally use this section to report on actions that will help British Columbia meet its provincial greenhouse gas reduction targets, engage the public, and improve environmental sustainability across all aspects of their organization.

Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Business Travel						
Virtual meeting technology						
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress	% of computers have web- conferencing software installed	Web conferencing equipment reviewed	Software evaluation to commence	2011	No End Date (Continuous)
Make desktop web-cameras available to staff	Ongoing/In Progress	% of staff have access to a desktop web-camera	Reviewed equipment		2010	No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Ongoing/In Progress	% of meeting rooms have access  1 to video-conferencing equipment	Reviewing best location for meeting rooms	Begin infrastructure for meeting room web conferencing	2011	2013
Behaviour change program						
Train staff in web-conferencing	In Development	% of staff are trained web- conferencing	Minimal training required; all staff have access for own use	Develop in-service training programs	2012	No End Date (Continuous)
Train staff in video-conferencing or provide technical support for video-conferencing set-up	In Development	% of staff are trained in video- conferencing or have access to technical support	Training required	Trial web conferencing meetings planned to ensure practicability	2011	2012
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress		All staff encouraged to attend meetings via web conference where practicable	Continue to remind staff of plans to reduce travel	2011	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress		Continue to encourage car pooling	Continue practice of encouraging car pooling	2010	No End Date (Continuous)
Education, Awareness, and Engagement						
Staff Professional Development						
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress		Completed Destination Conservation program for schools	Continue to implement Destination Conservation good practices in schools	2008	No End Date (Continuous)
Staff awareness/education						
Provide education to staff about the science of climate change	Ongoing/In Progress		Staff and students received education associated with Destination Conservation program	Continue to provide education associated with Destination Conservation good practices	2008	No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress		Staff and students received education associated with Destination Conservation program	Continue to provide education associated with Destination Conservation good practices	2008	No End Date (Continuous)
Client/public awareness/education						
Provide education to clients/public about the science of climate change	Ongoing/In Progress		K-12 students received education associated with Destination Conservation program and take that inforamtion home to parents	Continue education of K-12 students	2006	No End Date (Continuous)
Provide education to clients/public about the conservation of water, energy, and raw materials	Ongoing/In Progress		K-12 students received education associated with Destination Conservation program and take that inforamtion home to parents	Continue education of K-12 students	2006	No End Date (Continuous)
Other Sustainability Actions						
Water conservation						
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress		Low flow fixtures provided in most schools	Continue to implement installation of low flow fixtures	2006	No End Date (Continuous)
Put in place a potable water management strategy to reduce potable water demand of building-level uses such as cooling tower equipment, toilet fixtures, etc. and landscape features	Ongoing/In Progress		Use effuent water for irrigation at three school sites and untreated irrigation water at three school sites	Continue to implament plans to use non-potable water for irrigation services	2006	No End Date (Continuous)
Waste reduction/diversion						
Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities	Ongoing/In Progress		All schools and offices have bins to store recyclables for weekly pick up	Continue waste and recycle contract	2009	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress		Hazardous material storage facility cleaned out annually for removal to acceptable facility	Continue to remove hazardous materials from schools, store in district approved storage facility for annual removal	2006	No End Date (Continuous)

Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Procurement (non-paper supplies)						
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress		Continue to purchase green cleaning products	Continue to purchase green cleaning products	2008	No End Date (Continuous)
Building construction, renovation, and leasing						
Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities	Ongoing/In Progress		When capital projects are designed to sustainable standards equivalent to LEEDS	Continue to apply LEEDS equivalents standards to capital projects	2006	No End Date (Continuous)
Incorporate lifecycle costing into new construction or renovations	Ongoing/In Progress		Value management and lifecycle costing performed for all new capital projects	Value management and lifecycle costing performed for all new capital projects	2006	No End Date (Continuous)
Indoor air quality						
Incorporate low volatile organic compounds (VOCs) standards into procurement policy for products such as paints, carpets, and furniture	In Development			Standards to be developed for furniture; standards are implemented for interior finishes	2008	No End Date (Continuous)