

School District No. 67 (Okanagan Skaha)

2011 Carbon Neutral Action Report

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 for all students and staff.

District schools continue to practice the sustainable principles introduced through the Destination Conservation program.

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

2011 Greenhouse Gas Emissions

In 2011, operations in School District No. 67 (Okanagan Skaha) produced a total of 2052 carbon dioxide equivalent tonnes (CO₂e) of emissions. The school bus fleet produced 118 tonnes of CO₂e and those emissions do not require offset, leaving a total of 1935 tonnes of CO₂e requiring purchase of offsets. The majority, 1665 tonnes of CO₂e, were derived from heating and lights for school buildings. The balance was derived from vehicle fleet fuel and paper supplies.

It was estimated that fugitive emissions from stationary cooling comprise less than 0.01% of School District No. 67 (Okanagan Skaha) total emissions, and the ongoing effort to collect or estimate emissions from this source annually is disproportionately onerous. Thus, these emissions meet both the requirement to be below 1% of School District No. 67 (Okanagan Skaha) total emissions and the requirement to be onerous to collect. For this reason, emissions from this source have been deemed out-of-scope and are not included in School District No. 67 (Okanagan Skaha) total greenhouse gas emissions profile or offset purchase.

Offsets Applied to Become Carbon Neutral in 2011

In order to become carbon neutral in 2011, School District No. 67 (Okanagan Skaha) was required to purchase a total of 1935 tonnes of CO₂e from Pacific Carbon Trust at a cost of \$25 per tonne of CO₂e. Total cost for purchase of these carbon offsets for 2011 was \$48,375.00 for School District No. 67 (Okanagan Skaha).

Changes to Greenhouse Gas Emissions and Offsets Reporting from Previous Years

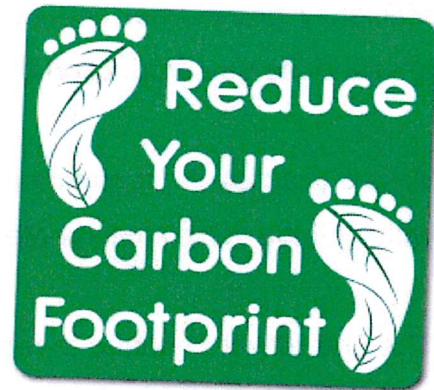
Following the public release of School District No. 67 (Okanagan Skaha) 2010 Carbon Neutral Action Report, it was determined that the total emissions for the 2010 calendar year were over reported by 172 tonnes CO₂e and offsets required to become carbon neutral in 2010 were over reported by 172 tonnes CO₂e.

The surplus of offsets purchased in 2010 has been applied against our 2011 emissions.

Actions Taken to Reduce Greenhouse Gas Emissions in 2011

The School District took progressive steps in regards to staffing in 2011, only staff with a demonstrated background in energy conservation and environmental stewardship were hired within the operations department.

The School District examined our existing buildings and set plans in motion to ensure that facility renovations and upgrades would be implemented with energy conservation and environmental impacts in the forefront.



Operational Changes in 2011

The new data center in Summerland came online allowing the District to further expand our program of server virtualization. Server virtualization allows an economy of scale when operating our computer networks, thus greatly reducing our energy consumption.

The centralized shutdown for all School District computers and other electronic devices that was completed in 2010 carried forward to all new computer installations in 2011. This management system ensures that all electronic equipment is shut down overnight and on weekends when not in use.

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 2012—2014

Plans were implemented to convert one of our larger secondary schools to a high efficiency geothermal heating system. The upgrade is projected to reduce the greenhouse gas production of the building by up to 70%.

Where practicable, recommendations of the study to reduce transportation costs will continue to 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.



Ron Shongrunden
Secretary-Treasurer

May 8, 2012

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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 <i>Greenhouse Gas Reduction Targets Act</i> .							
Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	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	0	% of vehicles are fuel- efficient models	Purchased 2 new mini vans	Continue planning for replacement vehicles	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	Purchased 2 new mini vans	Continue process	2008	No End Date (Continuous)
Perform regular fleet maintenance specifically to improve fuel-efficiency	Ongoing/In Progress	100	% of vehicles are subject to regular maintenance for fuel efficiency	Continue to service all 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							
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 policies	2009	2012
Encourage carpooling in fleet vehicles	Ongoing/In Progress			Transportation assistance parents are encouraged to car pool when driving to schools	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 Emissions (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)
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	In Development						
Owned buildings							

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
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 to 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	Ongoing/In Progress			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	0	% 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 refrigeration management	Refrigerant management system in place	Continuing process	2010	No End Date (Continuous)
Perform 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							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	75	% 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)
IT power management							
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	83	% of computers shut down automatically outside of regular business hours	Installation of power management software	Continue to implement by adding additional devices	2009	2012
Implement server virtualization	Ongoing/In Progress	10	% of servers have been 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	95	% 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	10	% reduction in printers, copiers, and/or fax machines since start year indicated	Did research and piloted the implementation	Continue to implement by adding additional devices	2009	2012
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Ongoing/In Progress	70	% 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	30	% 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	90	% of fridges are ENERGY STAR rated	New purchases are all ENERGY STAR rated: reduced energy consumption	Continue to implement by 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	90	% off other appliances are ENERGY STAR models	Did research and piloted the implementation	Continue to implement by adding additional devices	2007	No End Date (Continuous)

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Behaviour change program							
Help staff reduce personal energy use through "workstation tune-ups"	Ongoing/In Progress	70	% of current staff have 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			Continue to promote energy consumption savings to staff	Continue to promote	2009	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress			Continue to promote energy consumption savings to staff	Continue to promote	2009	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress			Continue to promote energy consumption savings to staff	Continue to promote	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			Continue to promote energy consumption savings to staff	Continue to promote	2009	No End Date (Continuous)
Encourage use of stairs instead of elevators	Ongoing/In Progress			Elevator keys provided for wheel chair access only	Continue to implement	2009	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			Continue to promote energy consumption savings to staff	Continue to promote	2009	No End Date (Continuous)
Promote hot water conservation	Ongoing/In Progress			Continue to promote energy consumption savings to staff	Continue to promote	2008	No End Date (Continuous)
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	100	% of total paper purchased contains 30% recycled content	All paper purchased contains 30% recycled content	Continue to purchase	2006	No End Date (Continuous)
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	80	% of network printers or photocopiers are set to automatic double-sided	New photocopiers purchased to reduce paper and energy consumption	Continue to replace	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	65	% of electronic documents available through website	Number of online documents increased	Implementation	2011	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress	65	% of materials are available online	Number of online documents increased	Implementation	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	1	% of staff currently have received collaborative software training	Converted home learning to Moodle	Continue to implement	2009	No End Date (Continuous)

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
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 recycle; advertise to schools surplus materials for reuse	Continue to implement	2006	No End Date (Continuous)
Other Paper Supplies Actions							
Usage of 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 being used 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 shipped direct	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)
Page monitor program	Ongoing/In Progress			Purchased electronic periodical subscriptions; purchasing electronic textbooks for math programs	Ongoing process	2008	No End Date (Continuous)

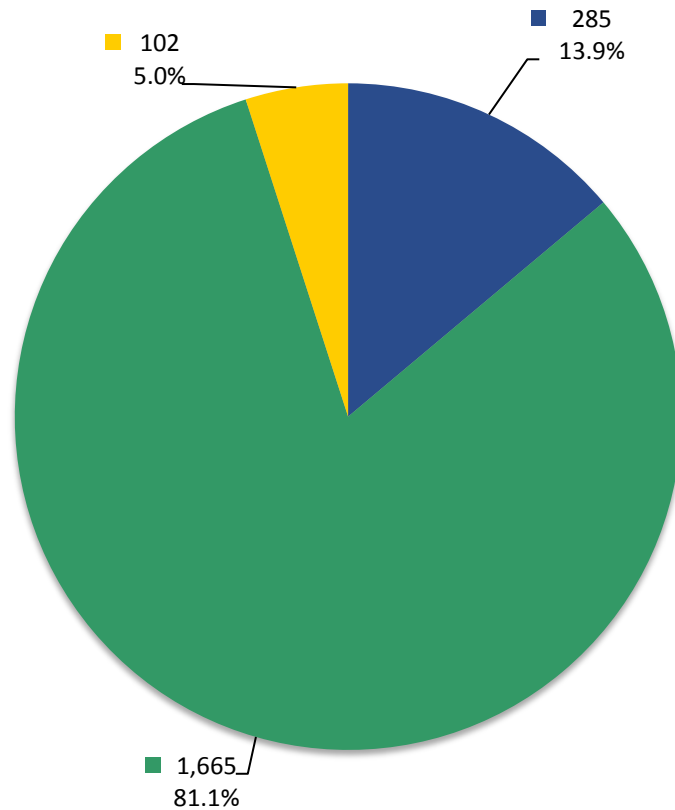
School District No. 67 (Okanagan Skaha) - 2011 Carbon Neutral Action Report

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 <i>Greenhouse Gas Reduction Targets Act</i> . 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 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Business Travel							
Policy and budgeting							
Create a low-carbon travel policy or travel reduction goal	Ongoing/In Progress			Encouraging car pooling whenever possible	Continue to implement	2005	No End Date (Continuous)
Virtual meeting technology							
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress	35	% of computers have web-conferencing software installed	Reviewed equipment	Continue to implement	2010	No End Date (Continuous)
Make desktop web-cameras available to staff	Ongoing/In Progress	15	% of staff have access to a desktop web-camera	Reviewed equipment	Continue to implement	2010	No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Ongoing/In Progress	1	% of meeting rooms have access 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	35	% 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	5	% of staff are trained in video-conferencing or have access to technical support	Training required	Trial web conferencing meeting 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 to reduce travel	2011	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress			Continue to encourage car pooling	Continue to implement	2010	No End Date (Continuous)
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	Ongoing/In Progress			Encourage walking when possible	Continue to implement	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	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 programs	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 programs	Continue to provide education associated with Destination Conservation good practices	2008	No End Date (Continuous)

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Provide green tips on staff website or in newsletters	Ongoing/In Progress			Tips added to the Six-Seven news letter	Continue practice	2011	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 information 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 information home to parents	Continue education of K-12 students	2006	No End Date (Continuous)
Other Sustainability Actions							
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 facilities for annual removal	2006	No End Date (Continuous)
Procurement (non-paper supplies)							
Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)	Ongoing/In Progress			Re-use office equipment and furniture whenever possible	Continue to re-use office equipment and furniture whenever possible	2006	No End Date (Continuous)
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							
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Ongoing/In Progress			Staff have been spoken too regarding respecting other staff members sensitivity to scented products	Continue to implement	2005	No End Date (Continuous)
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)

School District 67 - Okanagan Skaha (Penticton)
Greenhouse Gas Emissions by Source
for the 2011 Calendar Year (tCO₂e*)



Total Emissions: 2,052

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion (Building Heating and Generators) and Electricity
- Supplies (Paper)

Offsets Applied to Become Carbon Neutral in 2011 (Generated May 18, 2012 12:27 PM)

Total offsets required: **1,935**. Total offset investment: **\$48,375**. Emissions which do not require offsets: **118** **

*Tonnes of carbon dioxide equivalent (tCO₂e) 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.

** 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.