



A Community of Learners

School District No. 64 (Gulf Islands)
112 Rainbow Road
Salt Spring Island, B.C.
V8K 2K3

School District No. 64 (Gulf Islands) – 2012 Carbon Neutral Action Report

Executive Summary

In 2012, School District No. 64 (Gulf Islands) continued to make progress towards its goal of reducing greenhouse gas emissions and attaining carbon neutrality, School District 64 has been carbon neutral since 2010. This progress was realized through a number of actions ranging from fleet and building system upgrades to the installation of a micro-hydroelectric generating system and a solar photovoltaic electric generating system for the environmental school on Saturna Island.

2012 Greenhouse Gas Emissions

For 2012, the district had total Greenhouse Gas (GHG) emissions of 308 tonnes CO₂e. It was estimated that stationary fugitive emissions from cooling do not comprise more than 0.01% of School District No. 64 (Gulf Islands) total emissions and an ongoing effort to collect or estimate emissions from this source would be disproportionately onerous. For this reason, emissions from this source have been deemed out-of-scope and have not been included in School District No. 64 (Gulf Islands) total greenhouse gas emissions profile.

Offsets Applied to Become Carbon Neutral in 2012

For our district, total offsets purchased for 197 tonnes CO₂e at a cost of \$4,925.00 have been applied to become carbon neutral for 2011. As required by section 5 of the Carbon Neutral Government Regulation, 111 tonnes CO₂e of emissions resulting from the operation of school buses were reported as part of our greenhouse gas emissions profile in 2012. However, they were not offset as they are out-of-scope under section 4(2)(c) of the Carbon Neutral Government Regulation.

Changes to Greenhouse Gas Emissions and Offsets Reporting from Previous Years

Following the public release of School District No. 64 (Gulf Islands) 2011 Carbon Neutral Action Report, it was determined that the total emissions for the 2010/2011 calendar year were over reported by 111 tonnes CO₂e and offsets, required to become carbon neutral in 2011 were over reported by 111 tonnes CO₂e. The surplus of offsets purchased in 2011 have been applied against our 2012 emissions.

Actions Taken to Reduce Greenhouse Gas Emissions in 2012

Major initiatives taken in 2012 to reduce Greenhouse Gas emissions and promote environmental sustainability include the following:

- Exterior lighting system upgrades to Gulf Islands Secondary School, Saltspring Island Middle School and Salt Spring Elementary School.
- Installation of a micro-hydroelectric generator system for our environmental education facility on Saturna Island.
- Installation of a solar photovoltaic electric generating system for our environmental education facility on Saturna Island.

Plans to Continue Reducing Greenhouse Gas Emissions 2014 – 2016

Looking ahead to 2013 and beyond, the district will continue to focus on the retrofit of building mechanical systems for a number of our school buildings, completion of our Board policy on environmental sustainability, and continued support of environmental programming for our students and staff.

Signed:



Secretary Treasurer
School District No. 64 (Gulf Islands)

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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 Greenhouse Gas Reduction Targets Act.

Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Mobile Fuel Combustion (Fleet and other)					
Behaviour change program					
Provide fleet driver training to reduce fuel use	Ongoing/In Progress	Smart driver training reviewed in 2012.	Continuous program.	2010	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	Training provided to new drivers.	Continuous program for staff members. Continue dialogue with parents through school newsletters regarding "no idling" zones at schools.	2008	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress	Inter-departmental sharing of fleet vehicles promoted and encouraged.	Continuous program of promotion/encouragement at staff meetings.	2008	No End Date (Continuous)
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	Ongoing/In Progress	Alternatives to vehicle travel promoted and encouraged.	Continuous program of promotion/encouragement at staff meetings and in newsletters.	2008	No End Date (Continuous)
Vehicle fuel efficiency					
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	45% of vehicles are fuel efficient models.	Target is to replace three (3) aging vans in 2013.	2008	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	Replaced two (2) aging buses with two (2) new units.	Target is to replace an additional two (2) school buses in 2013.	2008	No End Date (Continuous)
Perform regular fleet maintenance to improve fuel-efficiency	Ongoing/In Progress	Provision of regular maintenance program.	Continuous program.	2008	No End Date (Continuous)
Stationary Fuel Combustion, Electricity					
Behaviour change program					
Help staff reduce personal energy use through ""workstation tune-ups""	Ongoing/In Progress	Workstations upgraded as part of ongoing maintenance program.	Continuation of ongoing maintenance program.	2008	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	Energy conservation measures reviewed at staff meetings.	Distribute Power Smart protocol guide to new staff when hired and to all staff on annual basis.	2008	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	Energy conservation measures reviewed at staff meetings. IT technicians continue to review power shutdown protocol with all computer lab classes (teachers and students).	Distribute Power Smart protocol guide to new staff when hired and to all staff on annual basis.	2008	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress	Energy conservation measures reviewed at staff meetings.	Ongoing program.	2008	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress	Energy conservation measures reviewed at staff meetings.	Ongoing program.	2008	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress	Energy conservation measures reviewed at staff meetings.	Ongoing program.	2008	No End Date (Continuous)
Encourage use of stairs instead of elevators	Ongoing/In Progress	Energy conservation measures reviewed at staff meetings.	Ongoing program.	2008	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress	Energy conservation measures reviewed at staff meetings.	Ongoing program.	2008	No End Date (Continuous)
Promote hot water conservation	Ongoing/In Progress	Energy conservation measures reviewed at staff meetings.	Ongoing program.	2008	No End Date (Continuous)
IT power management					
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	100% of computers shut down outside of regular business hours. Implementation of automatic shutdown software substantially complete.	Final configuration of automatic shutdown software completed.	2009	2013
Implement server virtualization	Completed (in	Installation of virtual lab server complete in all computer labs.		2009	2012

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
	Reporting Year)				
Apply auto-sleep settings on computer monitors and CPUs	Completed (in Previous Year)				No End Date (Continuous)
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices as part of a print management strategy	Ongoing/In Progress	95% reduction in printers, copiers, and/or fax machines since start year indicated. Continued replacement of stand-alone devices.	Replace remaining 5%.	2009	2013
Apply auto-sleep settings on printers, fax machines, and/or multi-function devices	Completed (in Previous Year)				No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	100% of computers are ENERGY STAR rated. Continued replacement of old units.	Replacement complete in 2013.	2009	2013
Other Stationary Fuel Combustion					
Exterior lighting upgrades installed at three (3) schools.	Ongoing/In Progress	Exterior lighting upgrades with high efficiency fixtures installed at three (3) schools in 2012.	Planned upgrades for exterior lighting in 2013 for three (3) schools.	2010	2013
Installation of solar preheat	Ongoing/In Progress	Planning and design of solar preheat for domestic hot water system at Gulf Islands Secondary School completed.	Installation of solar preheat system to be completed in 2013.	2012	2013
Installation of solar photovoltaic panels for electricity generation for the Saturna Ecological Education Centre (SEEC).	Completed (in Reporting Year)	Installation of solar photovoltaic panels for electricity generation for the Saturna Ecological Education Centre (SEEC). System design and installation completed in 2012.		2012	2012
Installation of micro-hydro electrical generator for the Saturna Ecological Education Centre (SEEC).	Completed (in Reporting Year)	Installation of micro-hydro electrical generator for the Saturna Ecological Education Centre (SEEC). System design and installation completed in 2012.		2012	2012
Installation of new energy efficient computer labs (Blue Curl technology)	Completed (in Reporting Year)	Two (2) remaining labs converted to Blue Curl technology. 100% of district computer labs now converted to Blue Curl technology.		2009	2012
Owned buildings					
Establish energy performance baseline for owned buildings	Ongoing/In Progress	BC hydro data reviewed on an ongoing basis.	Review baseline data.	2008	No End Date (Continuous)
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	Remaining buildings reviewed for potential energy conservation projects.	Develop applications for capital funding for building system upgrades in 2013/2014.	2009	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Ongoing/In Progress	Recovery and recycle program deployed through refrigerant contractor.	Continuous program.	2009	No End Date (Continuous)
Planning/management					
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	In Development	Research conducted on various systems.	Review programs in 2013. Conclude system reviews and provide recommendations.	2009	No End Date (Continuous)
Retrofit details for owned buildings					
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	In Development	Planning and budgeting for mechanical studies for three (3) schools completed.	Planning HVAC upgrade for Gulf Islands Secondary School in 2013. Applications for capital funding for mechanical system efficiency retrofits for respective three (3) schools to be submitted to the Ministry.	2010	2013
Upgrade lighting systems during retrofits	In Development	Preliminary review of building systems conducted in 2012.	Planning lighting upgrade for Gulf Islands Secondary School in 2013.	2010	2013
Upgrade/adjust control systems during retrofits	In Development	Preliminary review of building systems conducted in 2012.	Planning control system upgrades for Gulf Islands Secondary School, Fernwood Elementary School, Mayne Island School and	2010	2014

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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
			Galiano Community School in 2013/2014.		
Improve building insulation (including windows) during retrofits	In Development	Preliminary review of building systems conducted in 2012.	Planning window upgrade projects for Saltspring Island Middle School, Mayne Island School, Galiano Community School and Fernwood Elementary School in 2013/2014.	2010	2014
Supplies (Paper)					
Behaviour change program					
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	Ongoing training (Google Apps).	Continue with instruction and deployment.	2008	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress	Promote and support paperless meetings and presentations.	Continuous instruction and deployment.	2008	No End Date (Continuous)
Electronic media in place of paper					
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	Implemented use of Google Apps for Education (suite of collaborative software).	Continued instruction and deployment.	2009	No End Date (Continuous)
Use electronic document library for filing common documents	In Development	Partial implementation of independent servers. Use of Dropbox for filing common documents.	Continued instruction and deployment.	2010	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Completed (in Previous Year)				No End Date (Continuous)
Paper Type					
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	Promote and support use of recycled paper through staff awareness.	Ongoing program.	2008	No End Date (Continuous)
Purchase 100% post-consumer recycled paper	Ongoing/In Progress	Promote and support use of recycled paper through staff awareness.	Ongoing program.	2008	No End Date (Continuous)
Printer/document settings					
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	90% of network printers or photocopiers are set to automatic double-sided. Promote and support use of double-sided printing.	Continuous and ongoing.	2008	No End Date (Continuous)

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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

Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Business Travel					
Behaviour change program					
Train staff in web-conferencing	Ongoing/In Progress	Continued training and use of Elluminate / Skype software for web-conferencing.	Ongoing plans for training and researching other methods of web-conferencing.	2008	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Not Yet Evaluated				No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress	Carpooling as an option promoted and encouraged.	Continuous program of promotion / encouragement at staff meetings.	2008	No End Date (Continuous)
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	Ongoing/In Progress	Alternatives to vehicle travel promoted and encouraged.	Continuous program of promotion / encouragement at staff meetings and in newsletters.	2008	No End Date (Continuous)
Policy and budgeting					
Create a low-carbon travel policy or travel reduction goal	Not Yet Evaluated				No End Date (Continuous)
Virtual meeting technology					
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Completed (in Previous Year)				No End Date (Continuous)
Make desktop web-cameras available to staff	Completed (in Previous Year)				No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Not Yet Evaluated				No End Date (Continuous)
Education, Awareness, and Engagement					
Awards/Recognition					
Establish a sustainability/green awards or recognition program	Not Yet Evaluated				No End Date (Continuous)
Staff Professional Development					
Support green professional development (e.g., workshops, conferences, training)	Not Yet Evaluated				No End Date (Continuous)
Include green options in employee performance measurement system	Not Yet Evaluated				No End Date (Continuous)
Staff awareness/education					
Provide education to staff about the science of climate change	In Development	Preliminary review of educational programs/methods.	Continue planning and implementation.	2011	No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	In Development	Preliminary review of educational programs/methods.	Continue planning and implementation.	2011	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Not Yet Evaluated				No End Date (Continuous)
Provide sustainability education during new staff orientation	Not Yet Evaluated				No End Date (Continuous)
Team-building					
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Ongoing/In Progress	Environmental Action Group Encouraging Responsibility (EAGER) continued participating with the Board in developing Board policy on environmental sustainability.	Complete work on policy in 2013.	2008	2013
Provide resources and/or dedicated staff to support teams	Not Yet Evaluated				No End Date (Continuous)

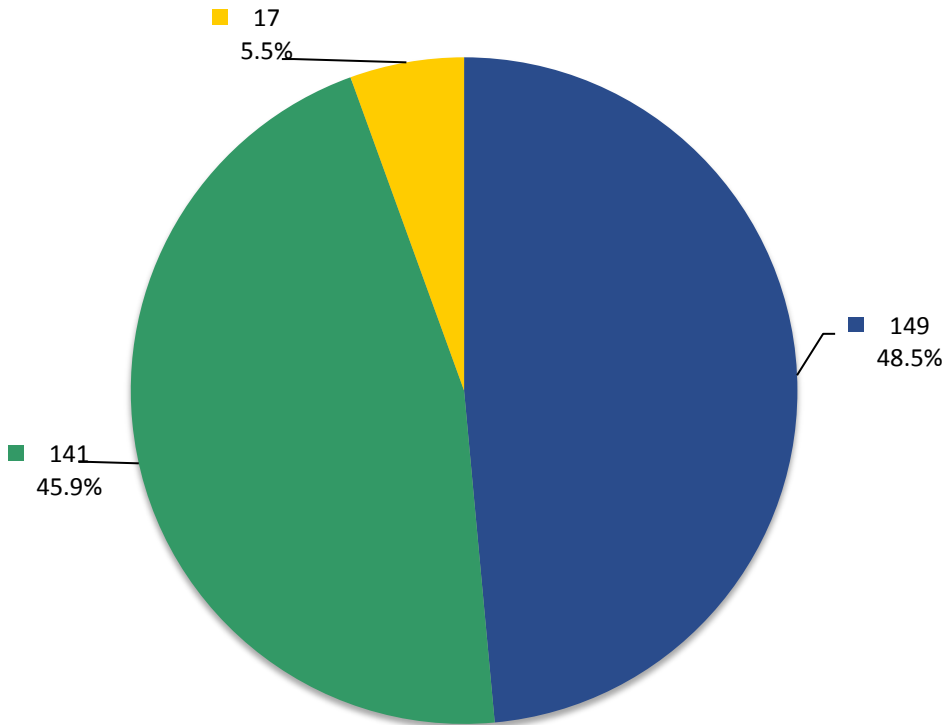
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Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Providing behaviour change education/training to teams (e.g., community-based social marketing)	Not Yet Evaluated				No End Date (Continuous)
Other Sustainability Actions					
Adaptation to Climate Change					
Assessed whether extreme weather events and/or long term changes in climate will affect the organization's business areas	Ongoing/In Progress	Education and training for staff regarding the possibility of severe winter weather events and response to such events.	Continued training and practice sessions.	2010	No End Date (Continuous)
Integrated considerations of extreme weather events and/or long term changes in climate into the organization's decision making.	In Development	Beginning policy development.	Continued work on policy development.	2012	No End Date (Continuous)
Building construction, renovation					
Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities	Ongoing/In Progress	Policy development to address reuse of materials.	Complete policy.	2009	No End Date (Continuous)
Incorporate lifecycle costing into new construction or renovations	Not Yet Evaluated				No End Date (Continuous)
Commuting to and from home					
Introduce telework/work from home policy	Not Yet Evaluated				No End Date (Continuous)
Offer staff a compressed work week	Ongoing/In Progress	Approval required on an annual basis.	Ongoing.	2008	No End Date (Continuous)
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress	Alternatives to motor vehicle travel promoted and encouraged.	Continuous program of promotion/encouragement at staff meetings and in newsletters.	2008	No End Date (Continuous)
Provide secure bicycle storage	Completed (in Previous Year)				No End Date (Continuous)
Procurement (non-paper supplies)					
Incorporate minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.)	Ongoing/In Progress	Policy development to address incorporating minimum recycled content standards for consumable, non-paper supplies.	Complete policy and adhere to the established minimum recycled content standard.	2008	No End Date (Continuous)
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	Policy development to address green standards.	Complete policy and adhere to the established standard.	2008	No End Date (Continuous)
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress	Initiated movement towards use of advanced "bio" products.	Ongoing program and support.	2008	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	Ongoing programs at Gulf Islands Secondary School and Galiano Community School.	Continuous and ongoing support.	2009	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress	Ongoing recycling program.	Continuous program and support.	2008	No End Date (Continuous)
Water conservation					
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress	Installed low flow water closets and urinal flush control units at the Saturna Ecological Education Centre (SEEC).	Further replacement of old fixtures.	2008	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	Water management review at all schools in progress.	Provide recommendations.	2010	No End Date (Continuous)
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	Completed (in Previous Year)				No End Date (Continuous)

**School District 64 - Gulf Islands
Greenhouse Gas Emissions by Source
for the 2012 Calendar Year (tCO₂e*)**



Total Emissions: 307

- 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 2012 (Generated May 31, 2013 10:19 AM)

Total offsets required: **197**. Total offset investment: **\$4,925**. Emissions which do not require offsets: **111** **

*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.