



## **Sooke School District #62 – 2012 Carbon Neutral Action Report**

### **Executive Summary**

Sooke School District No. 62 (SD62) continued the trend of on-going actions and activities towards reaching carbon neutrality.

Year 2012 again was filled with energy conservation measures from lighting and boiler upgrade projects and building HVAC systems re-commissioning projects to the increased emphasis on building schedules and IAQ controls. There was an extension and enhancement of the recycling program and a more aggressive move towards the use of alternate technology for teaching which will see a reduction in paper usage into the future. As always the acquiring of more fuel efficient vehicles as part of the vehicle replacement program has now become normal practice.

With past successes from the first provincial K-12 ESCO and the on-going yearly energy reduction measures, Sooke School District has a solid foundation and commitment to continually seek and implement ways to reduce energy consumption.

Harold Cull, SD62 Secretary-Treasurer

Date

### **Overview**

#### **Greenhouse Gas Emissions in 2012**

The total 2012 Greenhouse Gas (GHG) emissions from all sources covered by the Greenhouse Gas Reduction Targets Act (as reported in SMARTTool) is 3,175 tonnes CO<sub>2</sub>e.

It was estimated that stationary fugitive emissions from cooling do not comprise more than 0.01% of Sooke School District's 3,175 tonnes CO<sub>2</sub>e 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 Sooke School District total greenhouse gas emissions profile or offset purchase.

## **Offset Applied to become Carbon Neutral in 2012**

Sooke school district has applied for 2,695 tonnes CO<sub>2</sub>e to become carbon neutral for 2012. This represents an offset investment of \$67,375 before taxes.

As required by Section 5 of the Carbon Neutral Government Regulation, 481 tonnes CO<sub>2</sub>e 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 were out-of-scope under Section 4(2)(c) of the Carbon Neutral Government Regulation.

## **Changes to Greenhouse Gas Emissions & Offsets Reporting from Previous Years**

Following the public release of the School District 62 Sooke's 2011 Carbon Neutral Action Report, it was determined that the total offsets for the 2011 calendar year were under-reported by 304 tonnes CO<sub>2</sub>e. The difference in offsets required have been purchased and applied against our 2011 emissions

## **Emissions Reduction Activities**

### **Actions taken to reduce Greenhouse Gas Emissions in 2012**

Sooke School District No. 62 (SD62) continued the trend of on-going actions and activities toward reaching carbon neutrality. Year 2012 again saw numerous lighting upgrade projects with incentive programs from BC Hydro. This consistent activity has brought this school district closer to completing lighting upgrades in all occupied facilities.

The Continuous Optimization program sponsored by BC Hydro for two school sites will allow monitoring of these sites for the next few years and confirm savings as initially predicted

Recycling has always been an action in the district but this year saw an extension of that activity with enhanced recycling (sorting) introduced to the schools with sorting stations and monthly visits from the mobile recycling depot.

There was an increased emphasis on building controls centering on schedules and CO<sub>2</sub> sensor calibration checks and replacement that help on the reduction of building heating costs and the benefit of increased indoor air quality and occupant comfort.

This year marked an aggressive program in the increase in installation of Smart Boards & Projectors into the classroom environment. This action should result in a significant reduction of paper usage. It is the intention that this will promote the thinking of other ways to teach using a paperless electronic format.

As a continued activity, bus and maintenance fleet vehicle replacement uses the opportunity to upgrade to more fuel efficient vehicles.

### **Plans to continue Greenhouse Gas Emissions Reduction 2013-2015**

As previously reported, natural gas hot water heater tanks will continue to be replaced with energy efficient tank-less models. An on-going program of boiler replacement and HVAC upgrade projects already selected will continue to be scheduled and implementation and budget planning which allow for reduced GHG's and improved occupant comfort.

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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
<b>Mobile Fuel Combustion (Fleet and other)</b>					
<b>Behaviour change program</b>					
Provide fleet driver training to reduce fuel use	Ongoing/In Progress	One Professional Development Day used for facilities staff and bus drivers	One Professional Development Day will be set aside each year for training	2011	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	There is and anti-idling policy in place (since 2006)	Staff will continue to enforce this policy	2008	No End Date (Continuous)
<b>Vehicle fuel efficiency</b>					
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	Total of 4 vehicles replaced - 3 buses and 1 maintenance vehicle (welders)	Fuel efficient vehicle options are examined for all potential vehicle replacements as normal practice.	2008	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	"Right sizing" considerations as common practice were given in the vehicle replacement decision making process this year	"Right sizing" will continue to be a consideration in the process each year	2008	No End Date (Continuous)
Perform regular fleet maintenance to improve fuel-efficiency	Ongoing/In Progress	Scheduled maintenance was carried out as normal practice	Scheduled maintenance to be continued as normal practice	2008	No End Date (Continuous)
<b>Stationary Fuel Combustion, Electricity</b>					
<b>IT power management</b>					
Implement server virtualization	Ongoing/In Progress	Server virtualization changeover is done when servers require upgrade	IT department will continue with virtualization process as servers are upgraded	2012	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	All computers purchased this year are Energy Star rated	To continue enforcement of Energy Policy to ensure purchase of Energy Star products as normal purchasing practice	2009	No End Date (Continuous)
<b>Leased buildings</b>					
Establish energy performance baseline for leased buildings	Ongoing/In Progress	Leased buildings energy baselines are included in the owned buildings baseline performance review process	Facilities personnel will continue to monitor the performance of each building against it's energy baseline	2008	No End Date (Continuous)
<b>Owned buildings</b>					
Establish energy performance baseline for owned buildings	Ongoing/In Progress	Previous years baselines were maintained and updated within the year and used for energy reduction decision making	Maintenance personnel will continue to monitor building performance as part of normal operations	2008	No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress	LEED Gold is target during design of new buildings	LEED Gold will be included in new designs	2012	No End Date (Continuous)
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	Lighting retrofit at Journey Middle and boiler replacement/upgrade to condensing boilers at Hans Helgesen	Planning for one elementary and one middle school boiler replacement/upgrades to condensing type boilers	2008	No End Date (Continuous)
<b>Retrofit details for owned buildings</b>					
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	No building retrofits done within this reporting year	Mechanical upgrades during building retrofits will always be included in the design process of future projects	2011	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	Lighting retrofit completed at one middle school	Lighting retrofit projects are coming to a close - after this year of upgrades all lighting upgrades will be complete. Consideration for lighting controls	2008	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	Planning for remaining schools not on DDC control is on-going	Continue upgrading controls as needed	2011	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	Building insulation is part of the annual roofing program.	The windows replacement program.	2008	No End Date (Continuous)
<b>Supplies (Paper)</b>					
<b>Behaviour change program</b>					
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	All work stations now have SharePoint software and is widely used.	Further SharePoint use training to be considered	2011	No End Date (Continuous)
<b>Electronic media in place of paper</b>					

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### Actions Towards Carbon Neutrality

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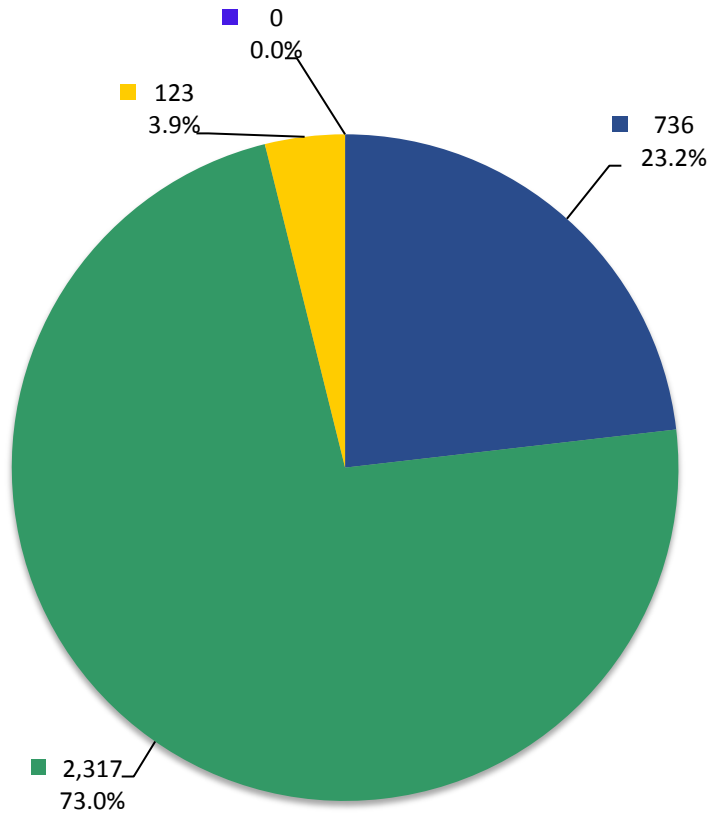
Action	Status	Steps Taken	Steps Planned	Start Year	End Year
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	SharePoint software used within the district	Promote expanded use of SharePoint through training	2011	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Ongoing/In Progress	Pay stubs now available only in e-notification	Will continue e-notification as standard 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

Action	Status	Steps Taken	Steps Planned	Start Year	End Year
<b>Business Travel</b>					
<b>Behaviour change program</b>					
Encourage carpooling to meetings	Ongoing/In Progress	An on-going activity but not regulated	To be continuously promoted and encouraged	2008	No End Date (Continuous)
<b>Virtual meeting technology</b>					
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress	Software was installed whenever Web Conferencing was needed	Will continue installs where needed	2008	No End Date (Continuous)
<b>Education, Awareness, and Engagement</b>					
<b>Team-building</b>					
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	In Development	School based green teams led by teacher champions	Seeking curriculum based program for future	2012	No End Date (Continuous)
<b>Other Sustainability Actions</b>					
<b>Commuting to and from home</b>					
Offer staff a compressed work week	Ongoing/In Progress	Flex time available and widely utilized	Flex time policy to remain and encouraged	2008	No End Date (Continuous)

**School District 62 - Sooke  
Greenhouse Gas Emissions by Source  
for the 2012 Calendar Year (tCO<sub>2</sub>e\*)**



**Total Emissions: 3,175**

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

**Offsets Applied to Become Carbon Neutral in 2012 (Generated May 31, 2013 10:18 AM)**

Total offsets required: **2,695**. Total offset investment: **\$67,375**. Emissions which do not require offsets: **481** \*\*

\*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.

\*\* 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.