

2009 Carbon Neutral Action Report School District No. 47 (Powell River)



Executive Summary

In 2009 School District 47 made further progress in reducing greenhouse gasses. In the area of computer technology strides were made with acquiring improved hardware, using software to shut down computer monitors at night and adjusting the work routines of technicians to lessen their environmental impact. The Operations Department made further progress related to student bussing, custodial service and electricity consumption. From fleet maintenance to driving technique training to monitoring driving behaviours, initiatives were undertaken. All cleaning products are now green, outdated lighting devices have been replaced and heating systems switched to on demand systems. Our Sustainable Schools Committee continues to lead the work of educating and inspiring employees to be aware of reducing greenhouse gases. They used their financial resources to provide inservice, establish awards and assist with supporting Destination Conservation. The electronic Green Glance newsletter is an effective communication vehicle. Student engagement took a major step forward in 2009 with the implementation of Destination Conservation. Every school has a DC team and every team has projects they are undertaking.

Overviews

Actions Taken to Reduce Greenhouse Gas Emissions in 2009

The following actions were undertaken to reduce greenhouse gasses. In the area of computer technology all district CRT monitors have been replaced with LEDs, software that shuts down all teacher computer monitors nightly has been installed, server virtualization is in progress and all computers and printers are Energy Star rated. A substantial amount of technical support service is now done remotely and we have begun replacing regular printers with duplexing printers. The implementation of a fleet maintenance program is underway and Zonar software is in use to monitor bus drivers' techniques while on the road. Reducing provincial emissions and improving sustainability has been another area of action. Our district-wide Sustainable Schools Committee has expanded their initiatives with staff in-service, a new environmental leadership award for students, the Green Glance electronic newsletter and the 2nd Annual Sustainability Conference for 80 intermediate students. To further involve students School District 47 is implementing Destination Conservation, every school has a multi-stakeholder team participating and Year 1 of our three year commitment is going very well. Sharepoint software has been introduced to share more information electronically and reduce meetings. Our application for a Trees For Tomorrow project at our high school was successful.

Plans to Continue Reducing Greenhouse Gas Emissions 2010 – 2012

School District 47 is involved in two building projects that will lead to a reduction in greenhouse gasses. In late 2010 construction will begin on a new elementary school, built to LEED Gold standards. A new field house adjacent to the all-weather playing field at our high school is partially completed. It includes a variety of green technologies and will be a demonstration site for elementary students. It is anticipated that two aging schools will close in 2012. As part of the ongoing education of students and staff there will be an emphasis on behavioural changes such as doing less printing, increasing double sided printing and consistently turning lights off in unused spaces. Continued support for the next two years of Destination Conservation and the Sustainable Schools Committee is critical to behaviour change. Increasing the recycled content of paper that is purchased, across the district, will be undertaken.

School District No. 47 (Powell River) - 2009 Carbon Neutral Action Report

| 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 12/31/09) | Performance to Date (as of 12/31/09) | | Steps Taken in 2009 | Steps Planned for 2010 -2012 | Start Year | End Year |
| Mobile Fuel Combustion (Fleet and other mobile equipment) | | | | | | | |
| Vehicle fuel efficiency | | | | | | | |
| Perform regular fleet maintenance to improve fuel-efficiency | Complete | 100 | % of vehicles are subject to regular maintenance for fuel efficiency | A program of regular maintenance is in place | | 2008 | 2009 |
| Behaviour change program | | | | | | | |
| Provide fleet driver training to reduce fuel use | Ongoing/In Progress | 80 | % of current drivers are trained | Driver in-service was provided on district professional development days | Continue driver in-service with a goal of all drivers being trained. | 2008 | No End Date (Continuous) |
| Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages) | Complete | | | All facilities have appropriate signage posted | | 2008 | 2009 |
| Encourage carpooling in fleet vehicles | Ongoing/In Progress | | | Computer technicians carpool whenever possible. | Continue to carpool and look for opportunities to do this more extensively. | 2008 | 2012 |
| Other Mobile Fuel Combustion Actions | | | | | | | |
| Install anti particulate mufflers | Complete | | | All school buses have had this work done to them. | | 2008 | 2009 |
| Install crankcase ventilation kits | Complete | | | All school buses have had this work done to them. | | 2008 | 2009 |
| Computer and software service is done remotely using remote access software. | Ongoing/In Progress | | | Use of remote access software was initiated. | Use remote access software as extensively as possible. | 2009 | 2012 |
| Computer service calls are planned to include multiple destinations in a single trip. | Ongoing/In Progress | | | Planning was done to reduce the number of service calls to schools. | Continue to reduce the number of service calls. | 2009 | 2012 |
| Zonar hardware and software is in use to monitor fleet driver practices. | Ongoing/In Progress | | | Zonar hardware and software installed. Training done with drivers. | Evaluation of data collected from Zonar and further fleet driver training as necessary. | 2009 | 2012 |
| Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings) | | | | | | | |
| Planning/management | | | | | | | |
| Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls) | Complete | 100 | % of buildings have a real time metering system installed | Completed real time metering installation. | | 2005 | 2009 |
| Owned buildings | | | | | | | |
| Establish energy performance baseline for owned buildings | In Development | 0 | | | Baseline data will be collected as personnel resources permit. | 2010 | No End Date (Continuous) |
| Achieve LEED NC Gold certification at a minimum for new construction or major renovations | In Development | | | New elementary school design will achieve LEED Gold certification. | Complete design of new elementary school. | 2010 | 2011 |
| Incorporate integrated design process into new construction or during renovations of owned buildings | Ongoing/In Progress | 100 | % of buildings built or renovated since start year indicated used the integrated design process | New elementary school currently being designed. Integrated design process is being used. | Complete design of new elementary school. | 2009 | 2011 |
| Complete energy retrofits on existing, owned buildings | Ongoing/In Progress | 0 | % of owned buildings have undergone energy retrofits since start year indicated | No progress was made. | Dependent on the availability of money for retrofits. | 2005 | No End Date (Continuous) |
| IT power management | | | | | | | |
| Install power management software which shuts down computers outside of regular business hours | Ongoing/In Progress | 97 | % of computers shut down automatically outside of regular business hours | Installed software that shuts down monitors on teacher computers. | Continue to install software on remaining teacher computer and on any new computers. | 2009 | 2012 |
| Implement server virtualization | Ongoing/In Progress | 15 | % of servers have been virtualized since start year indicated | The process of virtualizing servers was started. | Virtualize another 15% of district servers. | 2008 | 2010 |
| Apply auto-sleep settings on computer monitors and CPUs | Ongoing/In Progress | 50 | % of computers have auto-sleep settings applied | All monitors have had auto-sleep settings applied. | At this point there are no plans to extend this process to district computers. | 2008 | 2010 |
| Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices | Complete | 100 | % reduction in printers, copiers, and/or fax machines since start year indicated | Placed multi-function devices in all district work sites. | | 2005 | 2009 |

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|--|----------------------------|---|---|---|--|------------|--------------------------|
| Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices | Complete | 100 | % of devices have auto-sleep settings applied | Auto-sleep settings have been applied to all the indicated hardware. | | 2008 | 2009 |
| Replace computers with ENERGY STAR models during regular computer upgrades | Complete | 100 | % of computers are ENERGY STAR rated | The last of the district computers were replaced with Energy Star models. | | 2008 | 2009 |
| Appliances and electronic devices | | | | | | | |
| Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases | Ongoing/In Progress | 75 | % of fridges are ENERGY STAR rated | Refrigerators were replaced as the opportunity presented itself. | Continue to replace current refrigerators with Energy Star models as equipment is replaced. | 2008 | 2012 |
| Behaviour change program | | | | | | | |
| Ask staff to unplug electrical equipment or switch off power bars when not in use | Ongoing/In Progress | | | Staff reminded to unplug electrical equipment. | Continue to remind staff to unplug electrical equipment. | 2009 | 2012 |
| Provide reminders for turning off lights (e.g., signs, stickers, messages) | Ongoing/In Progress | | | Destination Conservation teams reminded staff and students. | Purchase stickers that can be used to remind staff and students. | 2008 | 2012 |
| Supplies (Paper) | | | | | | | |
| Paper Type | | | | | | | |
| Purchase 30% post-consumer recycled paper | Ongoing/In Progress | 5 | % of total paper purchased contains 30% recycled content | Established plan to increase the percentage of paper purchased over time. | Require all schools and the board office to achieve the goal of using only paper with recycled content | 2009 | 2012 |
| Printer/document settings | | | | | | | |
| Switch networked printers and photocopiers to automatic double-sided | Ongoing/In Progress | 5 | % of network printers or photocopiers are set to automatic double-sided | As printers need replacing we have begun to install duplex printers. | Continue to buy duplexing printers to replace existing equipment. | 2009 | No End Date (Continuous) |
| Electronic media in place of paper | | | | | | | |
| Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.) | Complete | 100 | % of staff workstations with software installed | Implemented the use of Sharepoint software. Every employee has access. | Continue to in-service teachers in the use of Sharepoint. | 2008 | 2012 |
| Post materials online that were previously printed | Ongoing/In Progress | | | Orientation materials for new employees have been posted online, reducing printed materials and meetings. | Review district printed materials and post them online if appropriate. | 2009 | No End Date (Continuous) |
| Switch to an electronic payroll notification system in place of paper pay stubs | Ongoing/In Progress | 95 | % | Ninety-five percent of all employees receive their payroll information electronically. | Incrementally reduce the five percent of employees receiving pay stubs to zero. | 2008 | 2012 |
| Behaviour change program | | | | | | | |
| Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.) | Ongoing/In Progress | 50 | % of staff currently have received collaborative software training | Sharepoint software was installed and an initial group of interested teachers were trained. | Train additional teacher in the use of the Sharepoint software | 2009 | No End Date (Continuous) |
| Encourage staff to hold paperless meetings or presentations (i.e., no handouts) | Ongoing/In Progress | | | Used staff meetings and Green Glance newsletter to promote this behaviour | Continue to encourage staff. | 2009 | No End Date (Continuous) |
| Encourage re-use of scrap paper | Ongoing/In Progress | | | Used staff meetings and Green Glance newsletter to promote this behaviour | Continue to encourage staff. | 2009 | No End Date (Continuous) |

School District No. 47 (Powell River) - 2009 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 | | | | | | | |
| Action | Status (as of 12/31/09) | Performance to Date (as of 12/31/09) | | Steps Taken in 2009 | Steps Planned for 2010 -2012 | Start Year | End Year |
| Business Travel | | | | | | | |
| Virtual meeting technology | | | | | | | |
| Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.) | Complete | 100 | % of computers have web-conferencing software installed | Software is installed for the use of the following programs: Partners In Education, Provincial Resource Program, teacher in-service | Use the Ministry of Education program as much as possible. | 2008 | 2009 |
| Make desktop web-cameras available to staff | Ongoing/In Progress | | | Hardware is installed for the use of the following programs: Partners In Education, Provincial Resource Program | Make additional hardware available when requested | 2008 | No End Date (Continuous) |
| Behaviour change program | | | | | | | |
| Train staff in web-conferencing | Ongoing/In Progress | 5 | % of staff are trained web-conferencing | A minimal amount of training was done. Web conferencing was used so that 12 teachers could receive in-service from the Canadian Space Agency. Access to technical support is readily available. | Look for opportunities to make further use of video conferencing and train additional teachers as necessary. | 2009 | No End Date (Continuous) |
| Train staff in video-conferencing or provide technical support for video-conferencing set-up | In Development | 0 | | | Continue to monitor the district needs and provide training if necessary. | 2008 | No End Date (Continuous) |
| Encourage staff to consider virtual attendance/presentation at events where possible | Ongoing/In Progress | | | A number of meetings were only available electronically so teachers and administrators did get experience in virtual attendance. | As additional events and meetings are only offered electronically an increased number of teachers will be encouraged to participate virtually. | 2008 | No End Date (Continuous) |
| Encourage carpooling to meetings | Ongoing/In Progress | | | District computer technicians began carpooling to school sites to provide support service. | Use the Green Glance newsletter to encourage carpooling. Encourage district management team members to carpool where possible. | 2009 | No End Date (Continuous) |
| Education, Awareness, and Engagement | | | | | | | |
| Team-building | | | | | | | |
| Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement | Complete | | | The Sustainable Schools Committee (SSC) is a well established, multi stakeholder group. | | 2008 | No End Date (Continuous) |
| Provide resources and/or dedicated staff to support teams | Ongoing/In Progress | | | The district provides a small fraction of an FTE of teacher time to facilitate the SSC. A budget allocation is also provided. | Continue to provide a dedicated budget for the SSC and the small amount of teacher time. | 2008 | No End Date (Continuous) |
| Providing behaviour change education/training to teams (e.g., community-based social marketing) | Ongoing/In Progress | | | Approximately 15 staff and 50 students received Destination Conservation training. | Year 2 of Destination Conservation training will be provided to students and staff. | 2009 | 2012 |
| Awards/Recognition | | | | | | | |
| Establish a sustainability/green awards or recognition program | Ongoing/In Progress | | | A \$500 scholarship was established, to be awarded to a high school student for environmental leadership. | Investigate establishing a second scholarship. | 2009 | No End Date (Continuous) |
| Staff Professional Development | | | | | | | |
| Support green professional development (e.g., workshops, conferences, training) | Ongoing/In Progress | | | Karsten Heuer, an environmentalist, was the keynote speaker at a district assembly attended by all teachers and support staff. Teachers were trained in Destination Conservation. | The Sustainable Schools Committee will look for other presenters to speak to employees. | 2009 | No End Date (Continuous) |
| Staff awareness/education | | | | | | | |
| Provide education to staff about the conservation of water, energy, and raw materials | Ongoing/In Progress | | | The Green Glance newsletter includes conservation information and is sent to all employees. Fifteen staff received Destination Conservation training. | Year 2 of Destination Conservation training will be provided to staff. | 2009 | 2012 |
| Provide green tips on staff website or in newsletters | Ongoing/In Progress | | | The Sustainable Schools Committee publishes their electronic Green Glance newsletter on a regular basis. | Investigate establishing a district based 'green' website. | 2008 | No End Date (Continuous) |
| Client/public awareness/education | | | | | | | |
| Provide education to clients/public about the science of climate change | Ongoing/In Progress | | | School student receive climate change education as part of various science courses. | Continue to educate students about climate change as part of their basic educational program. Investigate some form of presentation that could be used at school assemblies. | 2005 | No End Date (Continuous) |
| Provide education to clients/public about the conservation of water, energy, and raw materials | Ongoing/In Progress | | | Approximately 50 students received Destination Conservation training. They in turn educated other students through the projects they implemented. Conservation is a topic in various school curricula. | Implement Year 2 of Destination Conservation. | 2009 | No End Date (Continuous) |
| Provide green tips on client/public website or in newsletters | Ongoing/In Progress | | | Elementary school newsletters contained some green tips. | Encourage all schools to have a green tips section in their school newsletter. | 2008 | No End Date (Continuous) |

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| Other Education, Awareness, and Engagement Actions | | | | | | |
| Provide additional funding to support student engagement | Ongoing/In Progress | | The Sustainable Schools Committee made grant money available to school Destination Conservation teams to support their projects. | Continue to make grant money available. | 2009 | 2012 |
| Other Sustainability Actions | | | | | | |
| Waste reduction/diversion | | | | | | |
| Implement a hazardous waste reduction and disposal strategy | Complete | | No new steps were required. | | 2005 | 2009 |
| Procurement (non-paper supplies) | | | | | | |
| Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags | Complete | | Completed the process of replacing non-green cleaning products with green ones. | | 2007 | 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 | | No policy has been established. We are a small district with the ability and motivation to simply reuse materials where appropriate. | Continue to reuse materials where appropriate. | 2005 | No End Date (Continuous) |
| Incorporate lifecycle costing into new construction or renovations | Ongoing/In Progress | | The construction of a new elementary school is at the design stage and will incorporate lifecycle costing. | Monitor that planned green aspects of the school are incorporated into the construction process. | 2009 | 2012 |
| Indoor air quality | | | | | | |
| Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.) | Ongoing/In Progress | | Scent free schools or areas are implemented as necessary. | Maintain or expand scent free schools or areas on a needs basis. | 2007 | No End Date (Continuous) |
| Incorporate low volatile organic compounds (VOCs) standards into procurement policy for products such as paints, carpets, and furniture | Ongoing/In Progress | | When carpeting was replaced the new product purchased was low VOC. | When a school painting program is reestablished low VOC paint will be purchased. | 2005 | No End Date (Continuous) |
| Commuting to and from home | | | | | | |
| Introduce telework/work from home policy | Ongoing/In Progress | | Approximately three distance education teachers work from home on a regular basis. | Investigate whether there are further opportunities to telework. | 2008 | No End Date (Continuous) |
| Encourage commuting by foot, bicycle, carpool or public transit | Ongoing/In Progress | | This is promoted to staff in the Green Glance newsletter. Students are encouraged via assemblies, newsletters and special events. | Continue to encourage staff and students. | 2007 | No End Date (Continuous) |
| Provide shower or locker facilities for staff/students who commute by foot or by bicycle | Ongoing/In Progress | | This is only available at the middle school and high school, two of our eight schools. | Due to financial constraints the situation across the district is unlikely to improve | 2005 | No End Date (Continuous) |
| Provide secure bicycle storage | Complete | | All schools have bike racks for secure storage of student bikes. Staff usually take their bikes inside the school. | | 2005 | 2009 |
| Other Sustainability Actions | | | | | | |
| Conserve water used to sprinkle school playing fields. | Ongoing/In Progress | | Some field sprinkling systems were placed on timers. | Expand the use of timers with field watering systems as opportunities permit. | 2008 | 2012 |
| All obsolete computer hardware is recycled. | Complete | | Established the practice of recycling 100% of obsolete computer hardware. | | 2008 | 2009 |
| Application for Trees For Tomorrow grant was successful. | Complete | | Applied for grant to restore a bank area near Brooks Secondary using trees and shrubbery. | | 2009 | 2010 |