



Carbon Neutral Action Plan

2011



Executive Summary

The staggering statistics and realities of climate change have been in the headlines for several decades and the Delta School District has committed to fighting it every step of the way. The school district has adopted a District Sustainability Policy that focuses on: resource conservation, environmental protection, educational programs and meeting/exceeding regulation. With leadership from its full-time Energy Manager and support of the Board of Education and Executive Committee, our schools can work towards reducing their carbon footprints and encourage students to become environmental leaders in their schools. With the creation of the District Sustainability Committee consisting of various stakeholders and partner groups, carbon neutrality can be viewed from the perspective of everyone in the school district to ensure all comments and concerns are heard.

In the year of 2011, the school district invested in numerous sustainability projects that not only reduced our carbon footprint but also made financial sense. Energy costs are increasing and energy projects depend highly on feasibility and financial payback. Hardwire projects ranged from the installation of LED lighting products to high efficiency boilers while behavioural projects included energy awareness workshops, safe routes to schools walking initiatives, school composting and student energy audits. The Delta School District is committed to tackling sustainability from every angle possible and making sustainability a part of our community's culture.

Relative to 2010, our school district was able to reduce its overall carbon footprint for 2011 by just over 1.2%. This was critical given the colder temperatures experienced during winter and spring compared to the year before. With the help of all stakeholders including students, teachers, administrators and facility maintenance, the CO₂ emissions from paper use and electricity was reduced from the previous year. While the heating degree days increased by 13%, our fossil fuel combustion in the buildings only increased by just under 7%.

We are pleased to present the following report on our pursuit of becoming carbon neutral.

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2011 Greenhouse Gas Emissions

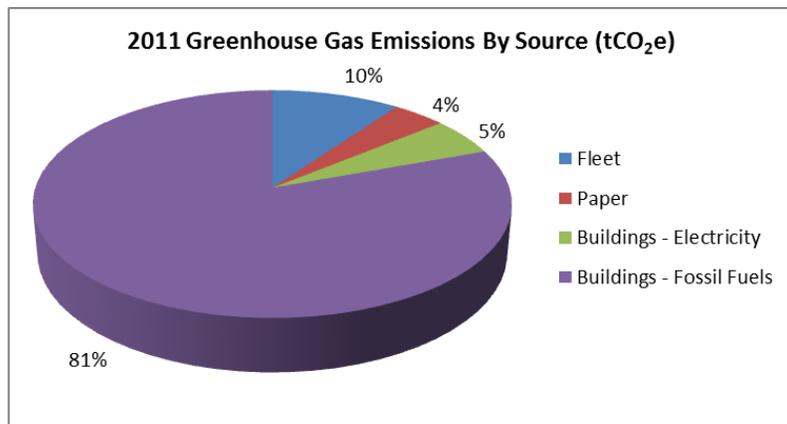
For calendar the year of 2011, the Delta School District’s greenhouse gas emissions were 4,072.61 tonnes CO₂e. The emissions are relatively stable from the 2010 calendar year.

Table 1 Delta School District Greenhouse Gas Emissions for 2011

	2011 (tCO ₂ e)	2010 (tCO ₂ e)	Change
Buildings			
Electricity	244.21	247.86	-1.48%
Natural Gas & Propane	3,262.16	3,049.42	+6.98%
Fleet			
Gasoline, Propane & Diesel	367.10	359.69	+2.06%
Biodiesel	35.96	32.51	+10.61%
Office Paper	167.20	437.23	-61.76%
Total Emissions 2011	4,076.63	4,126.71	-1.21%

The electricity consumption compared to the previous year dropped by almost 1.5%, while natural gas consumption increased by approximately 8% and propane consumption increased by approximately 3%. The increases were due to the cooler winter as evidenced by 13% increase in heating degree days (HDDs) as reported by the Environment Canada Weather Office (<http://www.climate.Weatheroffice.gc.ca>). The significant decrease in paper consumption also contributed to the reduction in the Delta School District’s carbon footprint.

The following chart summarizes the greenhouse gas emission by source.



Out-of-Scope Emissions include refrigerants: R-22 (HCFC), R-401a (HCFC), MP-66 (HCFC). Fugitive emissions were estimated to be 11.44 tCO₂e which is significantly less than 1 percent of the school district’s emissions. The value was estimated from the refrigerant recharge amounts of R-134a and R-404a (HFCs) in the year of 2011. In 2011, no fleet vehicle required refrigerant replenishment. The ongoing effort to collect or estimate emissions from refrigerants annually is disproportionately onerous. The emissions from refrigerants are deemed to be out of scope and have not been included in the total school district greenhouse gas emissions profile.

Offsets Applied to Become Carbon Neutral in 2011

The total emissions offset applied to become carbon neutral in 2011 as reported in the “Total for Offsets” line in SMARTTool is 4,024 tCO₂e. Total offsets to be purchased amount to \$100,600 plus HST.

As required by section 5 of the Carbon Neutral Government Regulation, 52 tCO₂e of emissions resulting from the operation of school buses were reported as part of our greenhouse gas emissions profile in 2011. 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 2010

Following the public release of Delta School District’s 2010 Carbon Neutral Action Report, it was determined that the total emissions and offsets required to become carbon neutral for the 2010 calendar year were under reported by 66 tCO₂e. The difference in offsets required have been purchased and applied against our 2010 emissions.

Emissions Reduction Activities

The following is a high-level summary of the activities the Delta School District continued with from 2010 as well as new projects initiated in 2011.

Hardwire Projects

Replaced Rooftop Heating Units with Air Source Heat Pumps

Replaced low efficiency antiquated gas-fired rooftop heating units at two schools with 300% efficient electric air source heat pumps with natural gas backup. Phase 1, consisting of 101 units, was completed in 2008; Phase 2, consisting of 74 units, was completed in 2009; Phase 3, consisting of 88 units, was completed in 2011.

Space Heating Boilers

At four sites, replaced antiquated, low efficiency conventional boilers with high efficiency condensing boilers, including heat exchangers for domestic hot water.

Outdoor Parking Lot and Building Exterior Lights

Replaced HID metal halide area lighting with lower power input induction lighting units. The lighting output from the new units is higher than the original units that had higher power inputs. These lights have been installed at four schools with more sites planned for 2012.





Upgraded Lighting Control

Installed occupancy sensors in classrooms, libraries, offices, hallways, storage rooms and washrooms where the lights were only on when the space is occupied during school operating hours. This project was continued from previous years and 13 schools were completed in 2011.

In addition, hallway lighting circuitry was modified to tier 1-2 alternating groups. Group 1 lights are on when the security system is disarmed and the occupancy sensors detect motion. Group 2 lights are on only during the occupied hours as per the weekly schedule programmed into the DDC system.

Upgraded to more Efficient Interior Lighting Fixtures

Existing 2-lamp T8 fixtures were replaced with 1-lamp T8 fixtures that produce equivalent lighting output than the previous. Lamps are the same therefore energy usage is reduced by 50%. A total of two schools were upgraded in 2011, with more planned for 2012.

Behavioural Projects

BC Hydro Energy Ambassador Program

For the school year beginning September 2011, four secondary schools with a total of 25 students are participating in the BC Hydro Energy Ambassador program where students take part in an energy workshop that discuss the purpose of energy conservation and share ideas on how to spread the information. The students then compose their own active presentations with games to present to elementary school students to spark an interest to be more energy aware. The energy ambassadors exercise their leadership skills and inspire the elementary school students to share their own ideas on how to reduce energy consumption.

Sustainability Grant

Student education is the main responsibility of the Delta School District. Students are encouraged to participate in any sustainable activities at their schools and be innovative in coming up with ways to be green. Many schools have started a “green team” or sustainability club where students work together on projects such as

- energy audits
- lights out days
- walk to school
- reduce/reuse/recycle
- “litterless” lunches
- composting
- rain gardens
- other sustainable initiatives

Schools can apply for a school district-funded sustainability grant to fund some of their green projects and as part of the requirements for funding, 25% of their activities have to be geared towards energy conservation. The latest round of applications started in September 2011, with nine schools participating and the results of their projects to be presented to the Board of Education in April 2012.

BC Hydro Workplace Conservation Awareness Program

For the school years 2010/2011 and 2011/2012, the Delta School District participated in a BC Hydro pilot program called the Workplace Conservation Awareness Program (WCA). Eleven schools participated in the program. There were 3 main objectives:

- Reduce paper usage by 10%
- Introduce an Energy Monitors Program involving students where there will be 2 student energy monitors at each site
- Implement a campaign geared towards turning off the lights and unplug equipment when not in use.

The BC Hydro program administrative requirements were completed for the 11 sites but the same conservation measures were applied to schools other than the original 11. As mentioned in the previous greenhouse gas emissions summary, the results are positive.

BC Hydro Outreach Team Presentations

As facilities operations staff are the stewards of our sites, they participated in a BC Hydro PowerSmart Pancake Breakfast presentation that involved a presentation and a game of “Jeopardy” with energy related questions. The event provided the staff with energy saving tips for not only the school sites but also for home such as using daylight, unplugging equipment to avoid phantom power and many other tips. The staff gained an understanding as to the purpose of being more energy conscious and have incorporated what they learned into their daily routines.





Plans to Continue Reducing Greenhouse Gas Emissions 2012 - 2014

Over the next three years, the Delta School District plans to incorporate the following into the operations of the schools:

Hardwire Projects

High Efficiency Domestic Hot Water Boiler Upgrade

As the age of some of the existing domestic hot water boilers are approaching the end of their expected life, the boilers are being replaced with high efficiency boilers with efficiencies of maximum 96%.

Thermal Energy by FortisBC

We have signed an agreement with FortisBC that would see the utility implement a thermal energy retrofit program involving 19 sites and three types of retrofit: closed loop geo-exchange, open loop geo-exchange and condensing boiler. Under the agreement, FortisBC will own and operate the new plants and sell thermal energy to the school district. This program is expected to reduce the carbon footprint of the school district by as much as 2,000 tCO_{2e} once complete.

High Efficiency/Energy Star

All equipment include appliances, computers are being replaced with high efficiency and/or Energy Star rated equipment when they have reached the end of their life.

HVAC Control Pilot

In partnership with FortisBC, the Burnaby School District (SD#41) and Delta School District have agreed to participate in a pilot project that involves controlling terminal HVAC units using occupancy sensors. Occupancy sensors have been installed in 25 classrooms and the control sequence of 24 classrooms has been incorporated into the operation while one remains as the control for comparison to determine the feasibility of installing occupancy sensors throughout and with FortisBC providing incentives.

Behavioural Projects

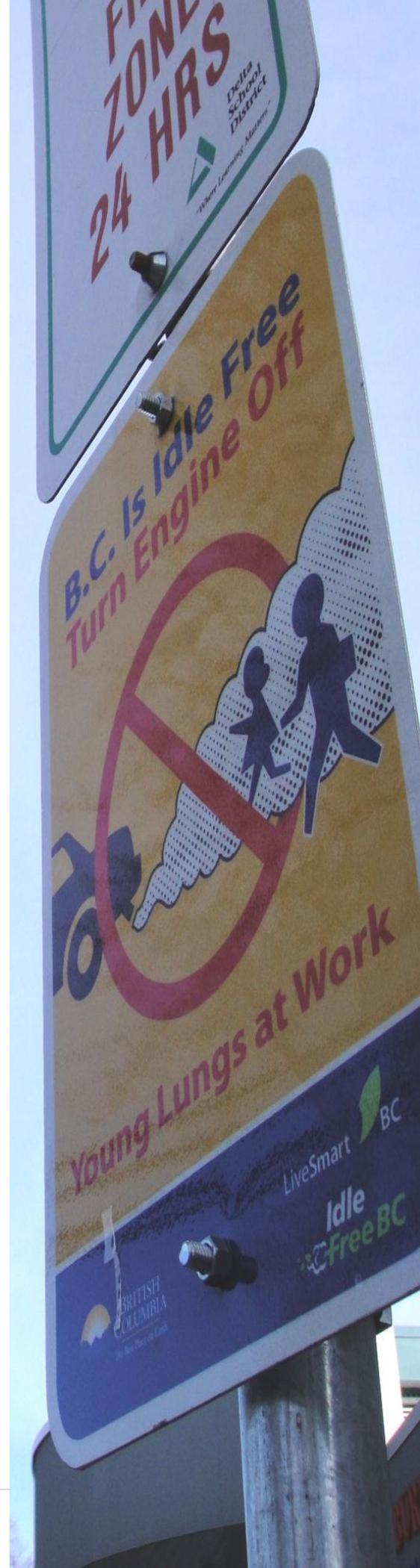
Energy Educational Dashboard

In an effort to spread energy conservation awareness across the Delta School District, “energy dashboards” will be installed in all school district sites (schools, board office, resource centre and maintenance facility). The energy dashboard will have real-time electricity, natural gas and water consumption displayed on an interactive touch-screen located at the building entrance. The dashboards are learning tools that can also be accessed via the internet from classroom computers.

Students currently study various environmental topics and undertake many green initiatives. The energy dashboards will be incorporated into the energy conservation practices already taking place. For example, students can turn off the lights and see an immediate drop in electricity consumption. Staff and students are encouraged to reduce their use of resources by turning off lights when not required, not letting the water tap run when not in use, unplugging equipment when not in use, and reducing photocopying. By introducing the dashboard, it quantifies and visualizes the efforts of staff and students to conserve energy. By seeing results, it would motivate the staff and students to continue their efforts.

CaGBC Green Up Program

The Energy Management Team has signed up for status updates on the Canadian Green Building Council “Green Up Program” and the feasibility of implementing the program to the school district sites will be reviewed when more information is available. It is estimated that the program information will be available in the spring of 2012.



Actions to Reduce Provincial Emissions and Improve Sustainability

Participating in the Community Energy and Emissions Plan

As a stakeholder in the Delta Community, the Energy Management Team represented the Delta School District in multiple “Community Energy & Emissions Plan” workshops organized by the Corporation of Delta. These workshops brought together all of the community stakeholders to review the community’s current emissions, emission reduction goal and recommendations of how to reach the goal. All attendees shared their experiences and opinions on their green projects as well as reviewing the types of development throughout the community.

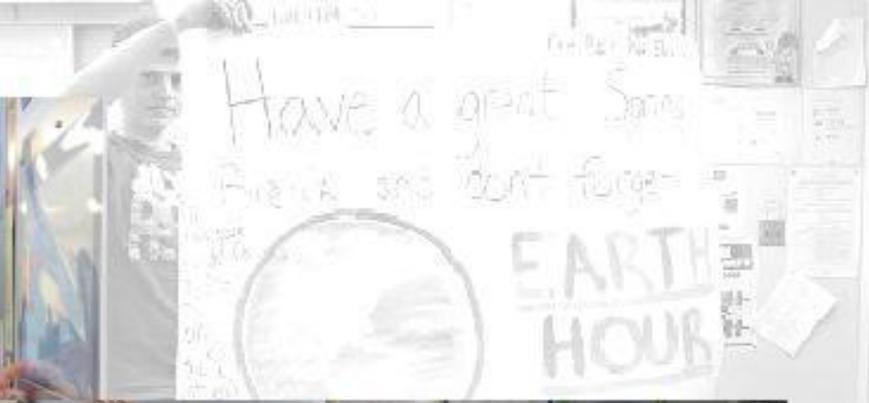
Link to Other Publicly-Available Sustainability Information

The Delta School District has a dedicated website to share all of the green initiatives we are currently working on, future plans, sustainability information sources, green tips and school district-related sustainability news. The site also shines a spotlight on the students and schools that are heavily involved in the sustainability clubs and activities.

To visit, go to

<http://maint.deltasd.bc.ca/sustainability/>





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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 (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	Completed in 2011	45 % of vehicles are fuel- efficient models	Took delivery of 6 Dodge Caravan CV mini-vans to replace Dodge Ram vans	Due to budget restrictions, no steps planned at this time	2008	2011
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Completed in 2011	40 % of vehicles down-sized since start year indicated	Took delivery of 6 Dodge Caravan CV mini-vans to replace Dodge Ram vans	Due to budget restrictions, no steps planned at this time	2009	2011
Perform regular fleet maintenance specifically to improve fuel-efficiency	Ongoing/In Progress	100 % of vehicles are subject to regular maintenance for fuel efficiency	Regular maintenance program established and performed on all fleet vehicles by certified in-house technicians	Continuation of program	2008	No End Date (Continuous)
Behaviour change program						
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Ongoing/In Progress	50 % observed reduction in vehicles (busses, private) idling while awaiting release of students for pickup and reduction in maintenance vehicles idling when stopped	Directives issued to maintenance staff enforced, more signs erected at a number of school sites	Due to budget restrictions, no new steps planned at this time	2008	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)						
Planning/management						
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	98 % of buildings have a real time metering system installed	Installed electricity and water real time metering (RTM) at 34 sites	Complete electricity and water RTM program and, budget permitting, implementation of natural gas RTM program	2009	No End Date (Continuous)
Owned buildings						
Establish energy performance baseline for owned buildings	In Development	20 % of owned buildings have an established energy performance baseline	In conjunction with BC Hydro new billing system, baseline billing introduced 01 January 2011 for LGS accounts	MGS accounts will be introduced in 2012	2011	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
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	50	% of owned buildings have undergone energy retrofits since start year indicated	Continued installation of occupancy sensors in all buildings areas, (classrooms, offices, washrooms, storage rooms): two Secondary (North Delta, Delview) and six Elementary (Neilson Grove, McCloskey, Jarvis, Heath, Hellings, Richardson) schools completed. Replaced all classroom fixtures (2 lamp to 1 lamp fixtures) at South Park and Devon Gardens Elementary Schools. Replaced 40 HID exterior light fixtures with induction light fixtures at North Delta and Delta Secondaries and Richardson Elementary. Replaced interior foyer HID light fixtures with LED and energy efficient fluorescent fixtures at five Secondary Schools (North Delta, Burnsvie, Sands, Delview and Delta). Completed replacement of boilers with energy efficient condensing boilers with heat recovery and heat exchanger for domestic hot water at three locations (Board Office and Annieville & Pinewood Elementaries). Retrofitted building management system controls with updated DDC systems at Holly Elementary. Installed real-time metering of electricity and water at 25 locations (75% completed), completed installation of solar hot water panels at three Secondary Schools (Delta, Burnsvie and Seaquam), and completed feasibility design, signed a contract with FortisBC and obtained PSECA funding to retrofit 11 buildings with geo-exchange and 8 buildings with condensing boiler thermal energy systems in 2012 and 2013.	Continue partial retrofits towards completing whole buildings eventually (highly dependent on Ministry/other funding). Complete real-time metering project, and occupancy sensor installation on lighting and 25 unit ventilators (Fortis Pilot Program). Implement thermal energy retrofits at 19 sites (FortisBC program).	1995	No End Date (Continuous)
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	100	% of retrofits since start year indicated had heating, cooling, and ventilation systems upgrades	Completed commissioning of new high efficiency condensing boilers at Pinewood and Annieville Elementary Schools. Completed major HVAC retrofit at School Board Office. Commissioned new solar hot water heating systems with a digital dashboard interface at Burnsvie, Seaquam and Delta Secondary Schools. Completed feasibility design, signed a contract with FortisBC and obtained PSECA funding to retrofit 11 buildings with geo-exchange and 8 buildings with condensing boiler thermal energy systems in 2012 and 2013.	Implement \$5 Million thermal energy retrofit program involving 19 sites and three types of retrofit: closed loop geo-exchange, open loop geo-exchange and condensing boiler. Project partners are FortisBC and PSECA.	2008	2013
Upgrade lighting systems during retrofits	Ongoing/In Progress	90	% of retrofits since start year indicated had lighting systems upgrades	Completed retrofit of all fluorescent light fixtures at South Park and Devon Gardens Elementary Schools with more energy efficient units.	Continue to upgrade hallway lighting and controls with high efficiency fixtures. Highly dependent on Ministry/other funding and grants.	Started before 1995	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	90	% of retrofits since start year indicated had control system upgrades or adjustments	Continued the installation of occupancy and other lighting control sensors in eight buildings (see above)	Continue program. Highly dependent on Ministry/other funding and grants.	Started before 1995	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	30	% of retrofits since start year indicated had insulation improvements	Replaced banks of windows at Richardson Elementary School with high efficiency, double glazed units. Upgraded roofing insulation at 9 buildings as part of roofing replacement program.	Potential projects under review. Retrofits highly dependent on Ministry/other funding and grants.	2010	No End Date (Continuous)
IT power management							
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	95	% of computers shut down automatically outside of regular business hours	Assessing options for balance of inventory.	Continue program where possible (some computers are too old/wrong OS to run the software)	2008	No End Date (Continuous)
Implement server virtualization	In Development			IBM preliminary review and report completed on technology infrastructure.	Review and implement all or some of the recommended actions, including server virtualization.	2011	2014

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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
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	In Development			Retained consultant to review all network printer, fax machine and photocopier installations in the District and come back with recommendations to replace with multi-function, energy efficient equipment.	Depending on consultant's report, roll-out equipment replacement.	2012	2013
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Ongoing/In Progress	85	% of devices have auto-sleep settings applied	Continued programming where applicable.	Continue program where possible (some units don't have the sleep mode capability). On new equipment, ensure auto-sleep mode activated.	2006	2013
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	75	% of computers are ENERGY STAR rated	On-going program whenever workstations or notebooks are replaced.	PCs or notebooks to be replaced with ENERGY STAR units only when they fail or are due for replacement. Highly dependent on Ministry/other funding and grants.	2009	No End Date (Continuous)
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress	40	% of fridges are ENERGY STAR rated	Refrigerators replaced with ENERGY STAR units as they failed.	Refrigerators to be replaced with ENERGY STAR units only when they fail. Highly dependent on Ministry/other funding and grants.	1995	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			Appliances replaced with ENERGY STAR units as they failed.	Appliances or electronic devices to be replaced with ENERGY STAR units only when they fail. Highly dependent on Ministry/other funding and grants.	1995	No End Date (Continuous)
Replace desk lamp incandescent bulbs with compact fluorescent (CFL) bulbs or source more efficient desk lamps for future purchases	Ongoing/In Progress			Bulbs and lamps replaced with CFL units as they failed.	Bulbs and lamps to be replaced with CFL units only when they fail. Highly dependent on Ministry/other funding and grants.	1995	No End Date (Continuous)
Behaviour change program							
Help staff reduce personal energy use through "workstation tune-ups"	In Development			11 schools participated in BC Hydro's Workplace Conservation Energy Awareness Program in 2010/11. Added Board Office and Delta Manor Education Centre in 2011.	Continuation of WCA program , restricted due to ongoing labour situation with teachers.	2010	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress			Posted on DeltaGreen website, with regular reminders sent out.	Continue energy saving tips program	2008	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress			Custodians requested to close blinds, shutters and sliding panels	Continue advocacy	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			Posted on DeltaGreen website, with regular reminders sent out.	Continue energy saving tips program	2008	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress	75	% of rooms in District facilities posting Turn It Off light switch stickers	Posted on DeltaGreen website, with regular reminders sent out. Encouraged student audits of classrooms at recess and lunch, and tabulate lights left on or turned off.	Continue awareness program	2008	No End Date (Continuous)
Promote hot water conservation	Ongoing/In Progress			Posted on DeltaGreen Website, Custodians using cold water chemical cleaners	Continue energy saving tips program	2008	No End Date (Continuous)
Other Stationary Fuel Combustion, Electricity, and Fugitive Emissions Actions							
Installed interactive touchscreens at front entrance of 34 sites to display RTM of Electricity and Water, and monthly Natural Gas usage	Ongoing/In Progress			Software leased, touchscreens installed complete with data wiring	Installation of programming and final connections for online use	2011	2012
Supplies (Paper)							

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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
Paper Type							
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	7	% of total paper purchased contains 30% recycled content	Once existing paper stocks were depleted, replaced majority with 7% recycled content for general printing/copying	Targeting 50% use of 30% recycled content paper	2008	2014
Printer/document settings							
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	In Development			Retained consultant to review all network printer, fax machine and photocopier installations in the District and come back with recommendations to replace with multi-function, energy efficient equipment and settings.	Depending on consultant's report, roll-out equipment replacement.	2011	2014
Electronic media in place of paper							
Use electronic document library for filing common documents	Ongoing/In Progress			Continued to use District Websites and intranet for storage of frequently accessed documents (policies, procedures, forms, drawings, etc.).	Continued advocacy for initiative	2006	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress			All District Policies & Procedures, Emergency Preparedness Manual and other formerly printed documents now only available electronically.	Aiming for job postings to eventually be only electronic, looking at other opportunities.	2009	No End Date (Continuous)
Behaviour change program							
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress			Continued advocacy for initiative	Continued advocacy for initiative	2007	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress			Continued advocacy for initiative	Continued advocacy for initiative	2003	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 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							
Virtual meeting technology							
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress			Installed as needed	Installed as needed	2006	No End Date (Continuous)
Make desktop web-cameras available to staff	Ongoing/In Progress			Installed as needed	Installed as needed	2008	No End Date (Continuous)
Behaviour change program							
Train staff in web-conferencing	Ongoing/In Progress			Trained as needed	Trained as needed	2008	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress			Continued advocacy for initiative	Continued advocacy for initiative	2010	No End Date (Continuous)
Education, Awareness, and Engagement							
Team-building							
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Ongoing/In Progress	75	% of Schools with some form of Green Team	Maintained DeltaGreen program - District Advisory Committee, site based Green Teams, 75% of schools are involved in various initiatives (program hampered by teacher job action)	Increase participation of schools to 100%	2008	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	Ongoing/In Progress			BC Hydro Student Programs - Secondary Schools involved in BC Hydro Energy Ambassadors program, presentations to Elementary Schools. Elementary Schools involved in the BC Hydro Energy Detective Program Grades 1-3	Continue with BC Hydro and District Student Programs	2004	No End Date (Continuous)
Awards/Recognition							
Establish a sustainability/green awards or recognition program	Ongoing/In Progress	30	% of school awarded sustainability grants	Continued Sustainable Schools Program, with Green Teams submitting project proposals and, upon approval by the District Advisory Committee, schools awarded \$1,000 grants (program hampered by teacher job action)	Continue and enhance program	2009	No End Date (Continuous)
Staff Professional Development							
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress			PowerSmart workshops for staff at Board Office, Operations Centre, Custodians, provided on-going Pro-D to management and supervisory staff	Continue to provide Pro-D and workshops as budget permits	2009	No End Date (Continuous)
Staff awareness/education							
Provide education to staff about the science of climate change	Ongoing/In Progress			Part of science curricula at both elementary and secondary levels	Continue and enhance program	2010	No End Date (Continuous)

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Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress		Provided schools with access to Utility Manager database for past utilities usage to see how they can conserve energy and water, provided tips and links to on-line tools and programs via Sustainability Website	Continue to explore other educational programs and tools and suggest implementation to Learning Services and schools. Go live with real-time metering, touchscreens with energy usage dashboards at all sites.	2009	No End Date (Continuous)
Provide green tips on staff website or in newsletters	Ongoing/In Progress		Published tips in DeltaGreen FirstClass conference and Sustainability Website	Maintain/enhance information on website	2009	No End Date (Continuous)
Client/public awareness/education						
Provide green tips on client/public website or in newsletters	Ongoing/In Progress		Published tips in DeltaGreen FirstClass conference and Sustainability Website	Maintain/enhance information on website	2009	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		Continued to replaced plumbing fixtures with more efficient units as they failed. Installed water meters at 34 sites for real-time metering (RTM)	Touchscreen access to staff and students on RTM consumption. RTM will identify over-usage or potential leakage. Fixtures to be replaced with more efficient units only when they fail	2008	No End Date (Continuous)
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	Ongoing/In Progress		Installation of Rain Gardens in conjunction with the Corporation of Delta and Cougar Canyon Streamkeepers to divert stormwater out of sewers	Continue program as opportunities arise and funding is available	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		Upheld District Sustainability Policy. A number of schools have started a composting program and the majority of schools has recycling programs	Continue to support those sites with waste reduction programs and encourage others to adopt similar programs in preparation for the Metro Vancouver landfill ban on organics in 2015 as per its current Solid Waste Management Plan	2000	No End Date (Continuous)
Procurement (non-paper supplies)						
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress		Continued to use sustainable products (environmentally friendly, minimal packaging) in custodial operations	Continue to implement program	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		Policy not formalized, but practice in place to reduce construction waste and reuse materials wherever practicable	Develop formal Departmental Policy when capital project approved by Ministry of Education (nothing since 2004)	2008	2014
Incorporate lifecycle costing into new construction or renovations	Ongoing/In Progress		All Project Identification Reports (PIR) submitted to the Ministry of Education for Seismic Upgrades contained life cycle costing (LCC)	When requested, continue to submit PIRs with LCC	2009	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	Ongoing/In Progress		Followed informal Departmental Policy for the purchase of paints and floor finishes	Continue to implement program	2004	No End Date (Continuous)
Commuting to and from home						
Provide secure bicycle storage	Ongoing/In Progress		Provided upon request and subject to available funding	Continue to implement program	Started before 1995	No End Date (Continuous)