

School District #35(Langley) - 2009 Carbon Neutral Action Report



Executive Summary

Take a look at our logo, on it is our Mission Statement, “Working together towards student success”. What more positive influence can we, as a District, provide than to encourage our staff and students to create a sustainable environment for generations to follow.

Actions Taken to Reduce Greenhouse Gas Emissions

In 2009

This year, as in past years, Langley School District has again moved towards becoming **carbon neutral**.

In Transportation:

- Replaced older model vehicles with new, emission controlled vehicles
- Have a Preventative Maintenance Program to ensure all of the fleet runs at their top performance levels.
- Doubled up Trades staff in vehicle use to reduce unnecessary travel.
- Ongoing upgrades with Eco-Energy Fleet Smart Drivers Education.

In the Schools:

- On the behavioural side, Langley has instituted an Energy Challenge to our Schools to aid in the reduction of energy consumption. This challenge if successful will be continued.
- With the assistance of Solar BC and NRCAN we have introduced Solar Hot Water to 1 Middle School and 1 K-12 school.
- With the support of BC Hydro, we are working on Continuous Optimization at our largest High School to ensure that all systems are working to peak operational standards.
- In 2009, with the Support of BC Hydro and PSECA, 6 of our schools received lighting upgrades from T12 to T8.

In IT:

- Deep Freeze applications have been installed or computer sleep controls activated in approximately 80% of our District Computers.
- All new computers coming into the District must be Energy Star models.
- Promoting the use of SharePoint.
- Implementing Laser fiche EDMS in HR, Payroll & Student Records.

In Purchasing:

- EDCO has added recycled paper on our contract and is now available to our schools.
- All printers/copiers have print and hold settings applied.
- Reduced number of appliances in schools and when replaced, only Energy Star models are permitted.

Plans to Continue Reducing Greenhouse Gas Emissions 2010 – 2012

There have been many success stories to celebrate but our focus is on the future. Langley has many more opportunities to enhance efficiencies and reduce consumption. With the help of our partner groups we hope to continue.

Langley School District has incorporated the conservation education as part of our curriculum. By instilling the virtues of conservation in our youth we are providing sustainability for our future.

Our partner groups both provincially and federally provide us with the incentive to move forward in upgrading our end of life transportation, mechanical and lighting systems. With their continued support we can look forward to further reductions in carbon emissions.

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Actions Towards Carbon Neutrality							
The actions listed below contribute to a reduction in greenhouse gas emissions from sources for which public sector organizations are responsible under the carbon neutral government regulation of the <i>Greenhouse Gas Reduction Targets Act</i> .							
Action	Status (as of 12/31/09)	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							
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	50	% of vehicles are fuel- efficient models	Decommissioned 2 propane vans with reduction in staff.	With no local capital funds, we are unable to pursue replacement of vans however we will still make application to MOE for a new bus.	2009	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	2	% of vehicles down-sized since start year indicated	Already have various sizes of bus fleet 24-72 passenger In order to increase efficiency in transport of students. White fleet is cargo vans to accommodate trades.	The Ministry will fund us for 1 replacement bus in 2010. This will be a 72 passenger and will allow us to decommission an older propane (inefficient fuel) bus of a similar size.	2009	No End Date (Continuous)
Perform regular fleet maintenance to improve fuel-efficiency	Ongoing/In Progress	100	% of vehicles are subject to regular maintenance for fuel efficiency	We have a preventative maintenance program that provides servicing for each bus every 25 days and for our light duty vehicles 2x per year.	no anticipated change in service levels	2002	No End Date (Continuous)
Replace small maintenance vehicles with more fuel-efficient models	In Development				Managers fleet under review this year.	2010	No End Date (Continuous)
Behaviour change program							
Provide fleet driver training to reduce fuel use	Ongoing/In Progress	60	% of current drivers are trained	2 staff went to train the trainer. All bus drivers given course provided by Eco-Energy Smart driver.	Next available Professional Dev. Day plan to extend traing to Light duty fleet drivers.	2009	2011
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Ongoing/In Progress	100	Part of District policy	signage at all schools. All drivers advised.	Reminders to staff on regular basis - particularly in winter months	2006	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress	100	buddy system in place - trades	All trade vans carry 2 passengers. This allows us to share phones as well as vehicles.	Decommissioning old, inefficient fleet vehicles as we are able.	2000	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Planning/management							
Enrol in a building energy benchmarking program (e.g., GREEN UP)	In Development			Currently doing internal benchmarking of schools in District.	Using other Districts Sq M intensity consumption to compare against ours.	2008	No End Date (Continuous)
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	30	% of buildings have a real time metering system installed	Pulse metering in at 12 sites for Natural Gas. Installation of new Electrical Pulse Revenue Meter at 1 High School this year. 1 High School and 1 Elementary school installed with 10 load meters each.	This depends on cost and availability of funding.	2009	No End Date (Continuous)
Owned buildings							
Establish energy performance baseline for owned buildings	Complete	100	% of owned buildings have an established energy performance baseline	Baseline Sq M consumption established as Key Performance Indicator. This assists us to evaluate how these schools are progressing.		2008	2009
Incorporate integrated design process into new construction or during renovations of owned buildings	Ongoing/In Progress	25	% of buildings built or renovated since start year indicated used the integrated design process	Installation of Solar Hot Water systems at two locations. During upgrade at one site, existing DHW was upgraded to on-demand hot water.	As funding available old DHW systems are being removed and replaced with on-demand hot water.	2009	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Complete	100	Preventative Maintenance	A sites with closed looped systems are regularly inspected through the Preventative Maintenance program in place		2002	No End Date (Continuous)
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	50	% of owned buildings have undergone energy retrofits since start year indicated	Lighting retrofits done in 6 schools. Mechanical upgrade in 1 High School. Replacement of DHW with on demand hot water in 10 schools.	Energy upgrades are realized as a necessity. They will be continued as funding is available.	2002	No End Date (Continuous)
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	2	% of retrofits (captured above) had heating, cooling, and ventilation systems upgrades	HVAC upgrade concluded in November 2009 at one of our High Schools.	Without Ministry funding it is impossible to move forward with any future upgrades although we have several schools in need.	2009	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	100	% of retrofits (captured above) had lighting systems upgrades	Seismic upgrade @ Belmont Elem. Lighting upgrade at same time. 4 other Elementary School provided with lighting upgrade.	All future upgrades are dependent on funding from Ministry	2009	2009

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Upgrade/adjust control systems during retrofits	Ongoing/In Progress	100	% of retrofits (captured above) had control system upgrades or adjustments	All retrofits for lighting and HVAC receive installation of controls.	Any and all future retrofits for either mechanical or lighting will also receive control upgrades.	2002	No End Date (Continuous)
Improve building insulation (including windows) during retrofits	Ongoing/In Progress	100	% of retrofits (captured above) had insulation improvements	When lighting and mechanical upgrades were done, all exposed areas had to meet the new building code. Seismic protection also met.	Whenever retrofits are done, once the building is altered it must meet all new building standards.	2009	No End Date (Continuous)
Install an on-site renewable energy demonstration project	Ongoing/In Progress	30	% of retrofits (captured above) had on-site renewable energy components	Solar panels installed on two High Schools. Assist with DHW for site.	Monitors are being installed to assist in Education program for students on Solar Energy.	2009	2010
IT power management							
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	80	% of computers shut down automatically outside of regular business hours	Applied the built-in power save features of the OS or used Deepfreeze	Apply the built-in power save features of the OS or used Deepfreeze	2007	
Implement server virtualization	In Development				Will virtualize 3-4 servers	2010	
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	80	% of computers have auto-sleep settings applied	Applied the built-in power save features of the OS.	Apply the built-in power save features of the OS.	2008	
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	In Development			Replaced where applicable	Will replace where applicable	2006	
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Complete	100	% of devices have auto-sleep settings applied	Made this the default setting on all such devices		2009	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress			All the new ones purchased are energy star.	New purchases are all energy star rated.	2007	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			Working on elimination of bar fridges from offices.	Planning to continue process in place	2009	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			As School request replacement appliances, Purchasing only allows energy star rates products to replace.	The process will continue to replace with energy star or eliminate the appliance altogether.	2009	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			Supplies list for schools include CFL. Most sites are using these over incandescent bulbs.	audits to be done periodically at sites	2008	No End Date (Continuous)
Behaviour change program							
Help staff reduce personal energy use through "workstation tune-ups"	In Development				Visit schools to see office inefficiencies'	2010	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress			Notice provided to Principals and value of unplugging small appliances.	continuation of emails and information on website planned.	2008	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress			Notice provided to Principals and value of closing the blinds both for security and reducing loss of heat in cold weather.	continuation of emails and information on website planned.	2008	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress			Energy Challenge in place with cash prize to the school that conserves the most energy.	Hopefully, depending on success of this year, the challenge will continue. Energy website also being set up.	2009	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	In Development			Notice to all staff the microwave use is limited to supervised students only. This is for safety as well as energy conservation	Reduction of appliances in schools over time. Increase in bar fridges has occurred in schools - these will be removed	2009	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			Energy Challenge (indicated above) Campaign running throughout the District.	New Challenge next year depending on success of this year.	2009	No End Date (Continuous)
Promote hot water conservation	Ongoing/In Progress			Replacing DHW tanks with on-demand Hot Water. Temperature on tanks turned down to both prevent scalding & save energy	Many opportunities to reduce energy consumption particularly when aligned with safety initiatives.	2008	No End Date (Continuous)
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	16	% of total paper purchased contains 30% recycled content	Edco included recycled paper on contract. Added to release order for schools to order.		2009	No End Date (Continuous)
Purchase 100% post-consumer recycled paper	In Development					2010	No End Date (Continuous)

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Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	20	% of network printers or photocopiers are set to automatic double-sided	Printers are done where possible. Photocopiers unable to proceed until existing contract ends in Nov. 2011.	Too expensive to buy out of existing contract but once expired we will seek many environmental enhancements	2011	No End Date (Continuous)
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	Complete	100	% of network printers have 'print and hold' settings applied	Always set as default		2011	No End Date (Continuous)
Electronic media in place of paper							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	50	% of staff workstations with software installed	Promoted the use of Sharepoint	Promote Sharepoint	2008	No End Date (Continuous)
Use electronic document library for filing common documents	Ongoing/In Progress	25		Implemented Laserfiche EDMS in HR, Payroll & Student Records	Continue to implement at other departments	2007	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress	70		Website used to complete forms/posting requests and wherever possible, new applications of this process are developed.	Pursue reduction in form usage wherever possible.	2000	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Complete	100				2008	2009
Behaviour change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	75	% of staff currently have received collaborative software training	We use Firstclass and Sharepoint and training provided several times/year		2008	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	In Development					2009	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress			Print shop collects excess paper and makes them into pads for re-use		2009	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 12/31/09)	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.)	In Development				Looking into purchasing some web conferencing software	2010	
Behaviour change program							
Train staff in web-conferencing	In Development				Will do so when purchased	2010	
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress			Each year more conference are done on-line.	Attend whenever announced	2008	
Encourage carpooling to meetings	Ongoing/In Progress			Happens when multiple staff going to same meeting location	will continue have carpooling as outlined in Steps Taken in 2009		
Education, Awareness, and Engagement							
Team-building							
Provide resources and/or dedicated staff to support teams	Ongoing/In Progress			Energy Manager in Place - supports BC Hydro Education Programs in Schools from K-12 including Energy Ambassadors	Programs continue in 2010 and hope to expand.	2009	No End Date (Continuous)
Awards/Recognition							
Establish a sustainability/green awards or recognition program	Ongoing/In Progress			Energy Challengee - completes in June 2010 with cash awards for best schools.	Depending on success of this year, campaign to continue	2009	No End Date (Continuous)
Staff Professional Development							
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress			Product Review is included as part of 1 of the 3 Professional Development days each year.	Continuation and expansion of Product Review in educating staff during Pro-D sessions.	2002	No End Date (Continuous)
Staff awareness/education							
Provide education to staff about the science of climate change	Ongoing/In Progress	25	District Pro D Educatoin	Provided presentation to Trades & Custodial staff on climate action and energy conservation	expand to Teaching staff in 2010	2009	No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	Ongoing/In Progress	30		Conservation is included in educational plans provided by BC Hydro . With 1/3 of sites on well water still, conservation is required.	As above - expansion of scope	2002	No End Date (Continuous)
Provide green tips on staff website or in newsletters	In Development				developing energy web page in District website	2010	No End Date (Continuous)
Client/public awareness/education							
Provide green tips on client/public website or in newsletters	In Development				working on energy web page on District site	2010	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	50		When retrofitting sites, all washroom facilities are upgraded to low flush and other water saving devices. DHW tanks being replaced with on-demand water systems. Solar panels installed at two sites.	On-going process	2002	No End Date (Continuous)

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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			Preventative Mtnc program in place for filter replacement. Practice in place to replace, as funding permits, existing fixtures with low water consumption fixtures.	On-going process	1992	No End Date (Continuous)
Waste reduction/diversion							
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress	100	annual program in place	pickup of hazardous chemicals that may be in schools. This is done annually to ensure proper disposal. Lighting upgrades - ongoing also eliminating pcbs in old balasts.	continuation of ongoing process	1992	No End Date (Continuous)
Procurement (non-paper supplies)							
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress	100	Product Review Committee	Product Review committee is supported with Board Policy in place to provide regulations on products used in District	expanded to trades and classrooms to ensure all of District is compliant.	2003	No End Date (Continuous)
Require a minimum purchase of sustainable, and organic food and beverages supplied by contracted food suppliers or caterers	Ongoing/In Progress			All vending machines in our schools contain only nutritious snacks. Orange/apple juice. Granola bars etc. Pop and chips are no longer available.	to continue	2008	No End Date (Continuous)
Indoor air quality							
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Ongoing/In Progress			with such a diverse population, we encourage no perfumes or aerosols in all our schools	ongoing	2008	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			All paint products are water based low VOC. Water base refinish on wood gym floors and elimination of carpets in District. Those areas that do receive carpets are all low VOCs	on going	2006	No End Date (Continuous)
Commuting to and from home							
Offer staff a compressed work week	Ongoing/In Progress			offered each year to 12 month staff to work a 4 day work week during summer.	continue with practice	2002	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Complete			Schools have all got shower facilities -all High schools have staff showers		1990	No End Date (Continuous)
Provide secure bicycle storage	Complete			all schools have bike lockup s		1990	No End Date (Continuous)