

## BC Liquor Distribution Branch - 2010 Carbon Neutral Action Report

### Executive Summary

Thinking green is not a new idea at the BCLDB. With a long term commitment to the environment, the BCLDB has been the leader in sustainable retailing in BC for more than 35 years. In support of the BC Government's *Greenhouse Gas Reductions Targets Act*, the BCLDB is building on its foundation of implementing leading edge sustainable programs. Everyone, including customers, employees and business partners of the BCLDB have an important role to play in creating a healthy and sustainable environment.

**Jay Chambers**  
General Manager

The LDB's sustainability objectives, as stated in the BCLDB *Green Plan* are:

- To support the B.C. Government's commitment to greenhouse gas (GHG) reduction and reporting, specifically the government's goal of carbon neutrality by 2010 and 33% reduction by 2020, (2) To reduce the BCLDB's overall environmental footprint
- To increase awareness and understanding of GHG issues among the BCLDB's 3,500 full and part-time employees, our customers and business partners
- To encourage change, behaviour and practices of industry, employees and consumers in support of the BCLDB's sustainability goals

### 2010 Greenhouse Gas Emissions

In 2010 the BCLDB was responsible for the following emissions (as reported in SMARTTool):

#### Totals Calendar Year 2010, BC Liquor Distribution Branch

	Measure	Quantity	CO <sub>2</sub>	Greenhouse Gases in Tonnes			
				BioCO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	tCO <sub>2</sub> e
<b><u>Scope 1 (Direct) Emissions</u></b>							
Mobile Combustion (Fleet)	Litres	155,541.43	378.24	11.56	0.02	0.02	<b>397.03</b>
Stationary Combustion, Reported	GigaJoules	54,843.11	2,800.21	0.84	0.05	0.07	<b>2,822.96</b>
<b><u>Scope 2 (Indirect) Emissions</u></b>							
Purchased Energy, Reported	GigaJoules	91,218.33	629.41	0	0	0	<b>629.41</b>
<b><u>Scope 3 (Business Travel and Office Paper) Emissions</u></b>							
Office Paper	Packages	5,368.00	25.61	0	0	0	<b>25.61</b>
<b>Total Emissions, Calendar Year 2010</b>			<b>3,833.47</b>	<b>12.4</b>	<b>0.07</b>	<b>0.09</b>	<b>3,875.00</b>
<b>Carbon Neutral or Offset Exempt</b>			<b>0</b>	<b>12.4</b>	<b>0</b>	<b>0</b>	<b>12.4</b>
<b>Total for Offsets</b>			<b>3,833.47</b>	<b>0</b>	<b>0.07</b>	<b>0.09</b>	<b>3,862.60</b>

## Offsets Applied to Become Carbon Neutral in 2010

In 2010, the LDB offset 3862.61 tonnes of greenhouse gas emissions by investing in offsets for a cost of \$96,565.25.

## Actions Taken to Reduce Greenhouse Gas Emissions in 2010

In 2010 the LDB continued to build on its sustainable initiatives in support of greenhouse gas reduction. Some of the key actions were:

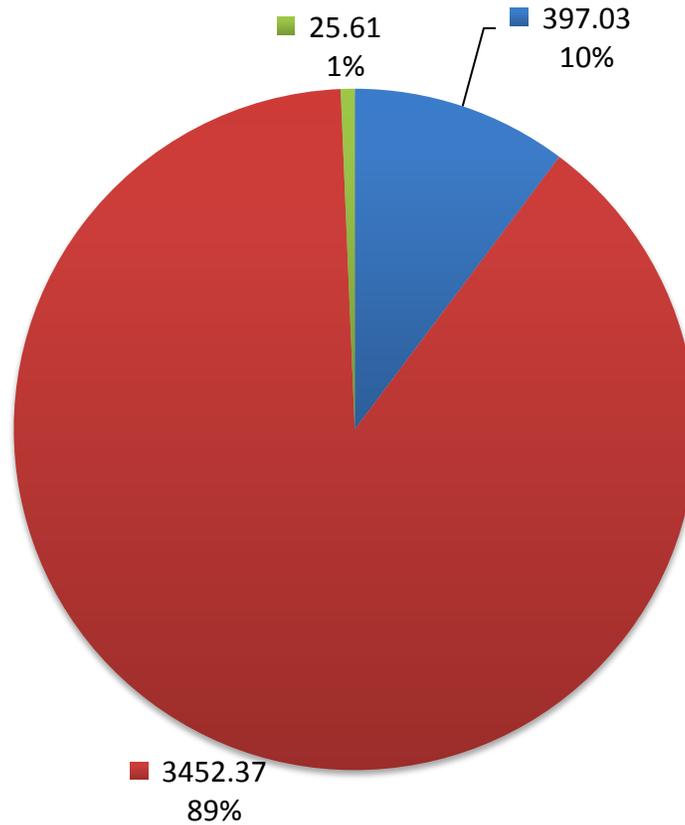
- Developed our Sustainable Energy Management Plan
- Continued replacement of existing fleet vehicles with hybrid alternatives
- Opened our first retail store in Vancouver with a green roof and living wall
- Finalized LEED building standards to ensure all future new constructions projects and remodels are LEED compliant
- Improved facilities at Head Office for employees who ride bikes to work
- Expanded employee and consumer awareness programs
- Developed Green Procurement Standards



## Plans to Continue Reducing Greenhouse Gas Emissions 2011-13:

- Implement the LDB Sustainable Energy Management Plan
- Install composting program in Head Office cafeteria
- Continue focusing on reducing single use plastic bags at retail level
- Continue working with other liquor jurisdictions and our suppliers towards reducing packaging weight of glass wine bottles

# British Columbia Distribution Branch Greenhouse Gas Emissions by Source for the 2010 Calendar Year (tCO<sub>2</sub>e\*)



**Total Emissions: 3875.01**

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion and Electricity (Buildings)
- Supplies (Paper)

## Offsets Applied to Become Carbon Neutral in 2010

Total offsets purchased: **3862.61**. Total offset investment: **\$96,565.25**. Emissions which do not require offsets: **12.4** \*\*

\*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.

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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 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
<b>Mobile Fuel Combustion (Fleet and other mobile equipment)</b>							
<b>Vehicle fuel efficiency</b>							
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	33	% of vehicles are fuel- efficient models	Three more fleet cars replaced with hybrids	Replace remaining fleet cars with hybrids as budget permits	2008	2012
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress			Three more fleet cars replaced with hybrids	Replace remaining fleet cars with smaller hybrids as budget permits	2008	2012
Perform regular fleet maintenance to improve fuel-efficiency	Ongoing/In Progress			Regular fleet maintenance is performed on all fleet vehicles	Continue with established maintenance program	Started before 1995	No End Date (Continuous)
<b>Behaviour change program</b>							
Encourage carpooling in fleet vehicles	In Development				Finalize protocol regarding fleet vehicles car pooling	2010	2011
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	In Development				Finalize protocol regarding alternatives to fleet travel	2010	2011
<b>Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)</b>							
<b>Planning/management</b>							
Enrol in a building energy benchmarking program (e.g., GREEN UP)	In Development			Recommended as part of LDB Sustainable Energy Management Plan (SEMP)	approve and begin implementation of SEMF	2010	No End Date (Continuous)
Reduce office space (square meters) per employee	Ongoing/In Progress	4	is the current average rentable square meters per employee	Ongoing minimization of Head Office work stations	continued review and adjustments to Head Office work stations	2009	2011
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress			Reccomended as part of LDB Sustainable Energy Management Plan (SEMP)	approve and begin implementation of SEMF	2010	2010
<b>Owned buildings</b>							
Establish energy performance baseline for owned buildings	Ongoing/In Progress			Continuous monitoring of performance benchmarks	continuous monitoring of performance benchmarks	2010	No End Date (Continuous)
Register for performance labelling/certification for operations and maintenance of owned buildings (e.g., LEED EB:O&M)	In Development			Recommended as part of LDB Sustainable Energy Management Plan (SEMP)	approve and begin implementation of SEMF	2010	No End Date (Continuous)
Incorporate integrated design process into new construction or during renovations of owned buildings	In Development				LEED plan to be fully implemented	2010	No End Date (Continuous)
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress			Recommended as part of LDB Sustainable Energy Management Plan (SEMP)	Approve and begin implementation of Sustainable Energy Management Plan (SEMP)	2010	No End Date (Continuous)
<b>Retrofitting owned buildings</b>							

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Completed in 2010	100	% of retrofits since start year indicated had heating, cooling, and ventilation systems upgrades	Retrofits in our Head Office will be completed by March 31, 2011. Main warehouse was completed last year.		2009	2011
Upgrade lighting systems during retrofits	Ongoing/In Progress			Head Office to be completely retrofitted by March 31, 2011	Store retrofits planned	2008	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress			Head Office controls completed by March 31, 2011	Store retrofits planned	2008	No End Date (Continuous)
<b>Leased buildings</b>							
Establish energy performance baseline for leased buildings	Ongoing/In Progress			Continuous monitoring of performance benchmarks	Continuous monitoring of performance benchmarks	2010	No End Date (Continuous)
<b>IT power management</b>							
Install power management software which shuts down computers outside of regular business hours	Ongoing/In Progress	52	% of computers shut down automatically outside of regular business hours	Power management applied to all desktop workstations excluding special machines and remote users 52 % of computers have auto-sleep settings applied.	Goal: power management to be applied to remote users' computers as well. All PCs have the agent installed, but only 52 % are activated because of remote access requirements	2010	No End Date (Continuous)
Implement server virtualization	Ongoing/In Progress	75	% of servers have been virtualized since start year indicated	All Distribution server infrastructure virtualized reducing 14 single function servers to 3 blades providing annual saving of 134,925 kWh (\$7,420) of power and 33,000 annual tons of cooling BC Hydro grant supported March 29, 2011 server virtualization, retired 3	BC Hydro grant supported server virtualization will retire an additional 14 single function servers. Six (6) mid-range unix servers replaced by one blade server and associated storage.	2010	2013
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	100	% of computers have auto-sleep settings applied	All workstations are preconfigured with sleep mode function	Will continue to optimize as per industry best practices	2010	2013
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Completed in 2010	98	% reduction in printers, copiers, and/or fax machines since start year indicated	All Head Office stand alone printers, copiers and fax machines replaced by multi function devices		2010	2011
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Completed in 2010	100	% of devices have auto-sleep settings applied	All Head Office stand alone printers, copiers and fax machines replaced by multi-function devices with auto sleep settings		2010	2010
Replace computers with ENERGY STAR models during regular computer upgrades	Completed in 2010	100	% of computers are ENERGY STAR rated	All new workstations are Energy Star rated		2010	2011
<b>Appliances and electronic devices</b>							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Completed in 2010			Replaced existing equipment with Energy Star compliant where needed and budget allows		2008	No End Date (Continuous)
Replace other appliances or electronic devices with ENERGY STAR models or source ENERGY STAR models for future purchases	Completed in 2010			Replaced existing equipment with Energy Star compliant where needed and budget allows		2008	No End Date (Continuous)
<b>Behaviour change program</b>							
Help staff reduce personal energy use through "workstation tune-ups"	In Development				Part of developing LDB Sustainable Energy Management Plan (SEMP)	2010	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	In Development				Part of developing LDB Sustainable Energy Management Plan (SEMP)	2010	No End Date (Continuous)

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Provide tips to staff on saving energy in the office while working outside of regular business hours	Completed in 2010			Staff are provided Energy Management information on a regular basis through various internal communication vehicles		2008	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Completed in 2010			All light switches and monitors have stickers reminding staff to turn off when not in use		2010	2010
<b>Supplies (Paper)</b>							
<b>Paper Type</b>							
Purchase 100% post-consumer recycled paper	Completed in 2010	90	% of total paper purchased contains 100% recycled content	All photocopy paper is 100% recycled paper		2010	No End Date (Continuous)
<b>Printer/document settings</b>							
Switch networked printers and photocopiers to automatic double-sided	Completed in 2010	100	% of network printers or photocopiers are set to automatic double-sided	As part of our photocopy update, all LDB printers are set to automatic double copy		2009	2010
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	Completed in 2010	100	% of network printers have 'print and hold' settings applied	As part of our photocopy update, all LDB printers are set to automatic double copy		2009	2010
<b>Electronic media in place of paper</b>							
Post materials online that were previously printed	In Development				As part of the LDB RIM project, this practice is encouraged but not yet fully implemented	2010	No End Date (Continuous)
<b>Behaviour change program</b>							
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	In Development				Develop criteria for employee awareness program for this issue	2010	No End Date (Continuous)
Encourage re-use of scrap paper	In Development				Develop criteria for employee awareness program for this issue	2010	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 12/31/10)	Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
<b>Business Travel</b>						
<b>Policy and budgeting</b>						
Create a low-carbon travel policy or travel reduction goal	In Development			Finalize and implement LDB sustainable travel policy	2010	2011
<b>Virtual meeting technology</b>						
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	In Development			Program is currently on hold	2009	No End Date (Continuous)
Make desktop web-cameras available to staff	In Development			Program is currently on hold	2009	No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	In Development			Program is currently on hold	2009	No End Date (Continuous)
<b>Education, Awareness, and Engagement</b>						
<b>Staff awareness/education</b>						
Provide education to staff about the science of climate change	Ongoing/In Progress		Part of the LDB ongoing green awareness program	To increase frequency of information sharing	2010	No End Date (Continuous)
Provide education to staff about the conservation of water, energy, and raw materials	Completed in 2010		Part of the LDB ongoing green awareness program	To increase frequency of information sharing	2010	No End Date (Continuous)
<b>Other Sustainability Actions</b>						
<b>Water conservation</b>						
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress		currently testing systems	Continued testing and implementation included as part of LEED review process	2008	2011
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	In Development		Ongoing review and discussion as part of warehouse roof replacement	Included as part of LDB LEED review process	2010	2011
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	In Development		Ongoing review and discussion as part of warehouse roof replacement	Included as part of LDB LEED review process	2010	2011
<b>Procurement (non-paper supplies)</b>						
Incorporate minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.)	Ongoing/In Progress		LDB Green Procurement standards developed and approved	Inclusion of LDB Green Procurement Standards in all future LDB RFP and Tenders	2011	No End Date (Continuous)
Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)	Completed in 2010		Enviromental Department reviews all RFP with this goal in mind	Inclusion of LDB Green Procurement Standards in all future LDB RFP and Tenders	2008	No End Date (Continuous)
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Completed in 2010		Included sustainable component in Head Office janitorial RFP	Inclusion of LDB Green Procurement Standards in all future LDB RFP and Tenders	2010	No End Date (Continuous)

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
<b>Building construction, renovation, and leasing</b>						
Incorporate lifecycle costing into new construction or renovations	In Development			Included as part of LDB Leed review process	2010	2011
<b>Indoor air quality</b>						
Incorporate low volatile organic compounds (VOCs) standards into procurement policy for products such as paints, carpets, and furniture	Ongoing/In Progress		LDB Green Procurement standards developed and approved	Inclusion of LDB Green Procurement Standards in all future LDB RFP and Tenders	2011	No End Date (Continuous)
<b>Commuting to and from home</b>						
Encourage commuting by foot, bicycle, carpool or public transit	Completed in 2010		Created LDB Bike Club, brought awareness to translink offers, expanded carpool parking spots		2010	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Completed in 2010		Facilities updated to encourage more riders to bike to work		2010	2010
Provide secure bicycle storage	Completed in 2010		Facilities updated to encourage more riders to bike to work		2010	2010