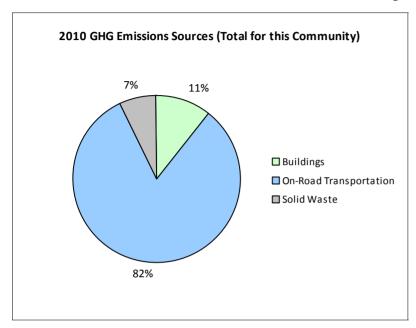
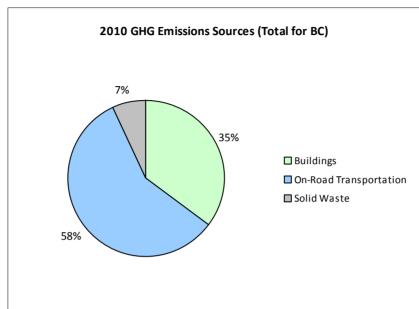
# BRITISH COLUMBIA LiveSmart BC

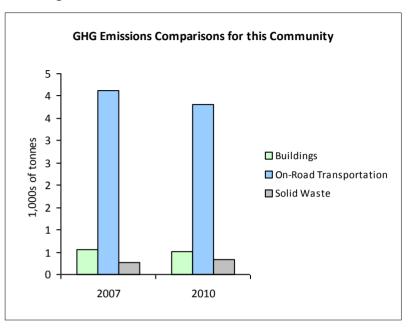
## **Lions Bay Village**

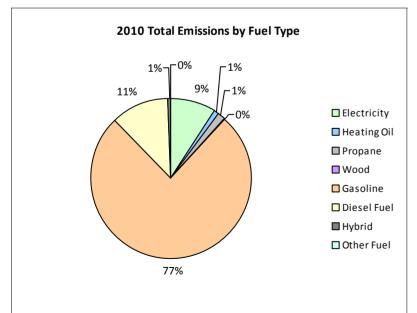
## **2010 Community Energy and Emissions Inventory**

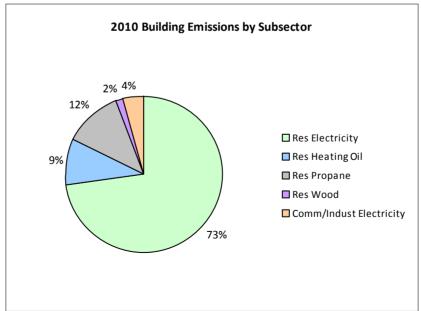
#### Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

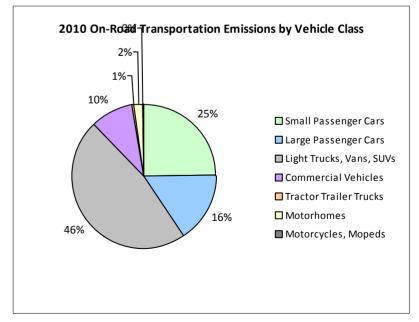














## 2010 Community Energy and Emissions Inventory

## Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

## **Core Items**

				2007					2010		
On-Road Transportation		Connections	Consumption	Avg VKT (km)	Energy (GJ)	C02e (t)	Connections	Consumption	Avg VKT (km)	Energy (GJ)	C02e (t)
Small Passenger Cars	Hybrid			10,600	16	0			18,600	71	5
	Gasoline	320	413,263 L	13,500	14,463	978	307	391,556 L	13,400	13,705	877
	Diesel Fuel	24	25,430 L	15,900	974	70	24	25,220 L	15,300	965	67
Large Passenger Cars	Hybrid			16,400	81	6			15,800	211	12
	Gasoline	185	272,787 L	13,000	9,548	645	186	258,185 L	12,200	9,035	578
	Diesel Fuel			12,200	94	6			13,600	147	10
Light Trucks, Vans, SUVs	Hybrid			15,400	126	8			16,800	145	9
	Gasoline	394	811,132 L	14,900	28,390	1,932	387	766,893 L	14,400	26,842	1,734
	Diesel Fuel			13,600	517	37			16,400	813	56
Commercial Vehicles	Gasoline	10	27,292 L	16,200	956	64	10	23,402 L	13,800	819	52
	Diesel Fuel	32	105,435 L	17,200	4,038	284	36	121,728 L	17,800	4,662	317
	Other Fuel			11,300	52	4			10,500	48	4
Tractor Trailer Trucks	Diesel Fuel			12,200	196	13			22,800	332	24
Motorhomes	Gasoline			17,100	670	45			17,100	665	41
	Diesel Fuel			14,900	292	21			14,400	291	20
Motorcycles, Mopeds	Gasoline	15	3,170 L	4,700	111	7	18	5,255 L	6,600	185	11
Totals		980	1,658,509 L	14,041	60,524	4,120	968	1,658,509 L	13,658	58,936	3,817

			20	07				2010	
Buildings		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Wood	N/A	450 GJ	450	9	N/A	419 GJ	419	8
	Heating Oil	N/A	755 GJ	755	53	N/A	703 GJ	703	48
	Propane	N/A	1,117 GJ	1,117	68	N/A	1,040 GJ	1,040	63
	Electricity	567	16,227,389 kWh	58,419	406	564	15,009,651 kWh	54,035	375
Commercial/Small-Medium Industrial	Electricity	45	1,233,101 kWh	4,439	31	45	859,754 kWh	3,095	21
Totals		612		65,180	567	609		59,292	515

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## 2010 Community Energy and Emissions Inventory

## Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

				2007				2010	
Solid Waste		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	1,065 t	N/A	270	0	716 t	N/A	340
Totals		0			270	0			340

# **Totals for Transportation, Buildings and Solid Waste**

	2007 (Population: 1,402)			2010 (Population: 1,395)			
Fuel Type	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)	
Hybrid	0 L	223	14	0 L	427	26	
Gasoline	1,527,644 L	54,138	3,671	1,445,291 L	51,251	3,293	
Diesel Fuel	130,865 L	6,111	431	146,948 L	7,210	494	
Other Fuel	0 L	52	4	0 L	48	4	
Wood	450 GJ	450	9	419 GJ	419	8	
Heating Oil	755 GJ	755	53	703 GJ	703	48	
Propane	1,117 GJ	1,117	68	1,040 GJ	1,040	63	
Electricity	17,460,490 kWh	62,858	437	15,869,405 kWh	57,130	396	
Solid Waste	1,065 t	0	270	716 t	0	340	
Grand Totals		125,704	4,957		118,228	4,672	

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#### **2010 Community Energy and Emissions Inventory**

#### Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

## **Supporting Indicators**

No new supporting indicator data have been provided in the 2010 reports. Work is currently underway to produce a complete second round of data for the indicators below in the 2012 reports (available in 2014). In the interim, we are including the same supporting indicator data that was provided in the 2007 reports. Feedback is requested on all supporting indicators; please contact us directly at

#### Housing Type - Private dwellings by structural type

Housing type is important for reducing building-related GHG emissions and energy consumption. A trend toward fewer single family dwellings indicates an increase in residential density, which is known to reduce transportation-related GHG emissions.

	1996		2001		2006	
	Units	%	Units	%	Units	%
Single Detached House	415	46	500	95	455	89
Semi-Detached House	0	0	0	0	0	0
Row House	15	2	20	4	20	4
Apartment, Duplex	40	4	0	0	30	6
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	15	2	5	1	5	1
Other Single Attached House	0	0	0	0	0	0
Movable Dwelling	0	0	0	0	0	0

#### **Parks and Protected Greenspace**

Parks and protected greenspaces are important for the protection and enhancement of community carbon sinks.

	200	9
	Units	%
National Parks	0	0
Provincial Parks / Protected Areas	0	0
Local Parks	1	0
Agricultural Land Reserve	0	0
Other land use	269	100
Total Parks and Protected Area	1	0
Total Land Area	271	100

<sup>\*</sup> Total is net of Indian Reserves

#### **Residential Density**

Increasing residential densities is known to reduce vehicle use resulting in fewer transportation-related GHG emissions. There are many additional benefits from more compact development.

	2009	)
	Units	%
National Parks	0	0
Provincial Parks / Protected Areas	0	0
Local Parks	1	0
Agricultural Land Reserve	0	0
Other land use	269	100
Total Parks and Protected Area	1	0
Total Land Area	271	100

<sup>\*</sup> Net of Crown land, parks, Indian Reserves, water features, airports, ALR, waste disposal site

#### Commute to Work - Employed labour force - by mode of commute

An increase in the number of people choosing to walk, cycle and use transit reduces GHG emissions. More compact, complete, connected communities should see an increase in the use of these transportation modes.

	1996		2001		2006	
	Units	%	Units	%	Units	%
Car, Truck, Van as Driver	595	92	620	88	455	78
Car, Truck, Van as Passenger	15	2	30	4	55	9
Public Transit	20	3	20	3	35	6
Walked	10	2	25	4	35	6
Bicycle	10	2	0	0	0	0
Motorcycle	0	0	0	0	0	0
Taxicab	0	0	0	0	0	0
Other Method	0	0	10	1	0	0

#### **Commute Distance**

Shorter commute distances generally reduce GHG emissions by increasing the likelihood of people walking, cycling or using transit. Commute distance is also indicative of the 'completeness' of a community from an employment perspective.

	2006	
	Units	%
Less than 5 km	50	10
5 to 9.9 km	0	0
25 km or more	110	22
15 to 24.9 km	305	62
10 to 14.9 km	25	5

<sup>\*\*</sup> Quantity of parkland may be underestimated

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## 2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

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#### 2010 Community Energy and Emissions Inventory

#### Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

## **Supporting Indicators Under Consideration**

Work is currently underway to produce a complete second round of supporting indicators for the 2012 reports (available in 2014). These reports will new data for the five supporting indicators included in the 2007 and 2010 Reports:

- Housing Type: Private dwellings by structural type
- Commute to Work: Employed labour force by mode of commute
- Commute Distance
- Residential Density
- Parks and Protected Greenspace

And in addition, the 2012 reports we are working to be able to include:

- Proximity to Transit
- Building Energy Intensity
- Building Floor Space
- Waste Diversion

We are continuing to work towards reporting on even more supporting indicators in the future including:

- Proximity to Services (e.g destinations such as grocery store, school, other retail etc.)
- Transit Ridership
- Water Use
- Impervious Surface Cover: % change in impervious surface cover
- Tree Canopy Cover: % change in tree canopy cover
- District Energy: # and energy output (e.g. buildings connected, energy consumed in GJ or kWh) of district energy systems by energy type e.g. renewable or non-renewable)
- On-Site Renewable Energy: # and energy output (in GJ or kWh) from households producing and/or consuming on-site renewable heat (e.g. biomass, solar thermal, geo-exchange) and/or electrical (e.g. solar photovoltaic, small wind, small scale hydro) energy
- Energy Recovery from waste energy (GJ or kWh) recovered from waste (e.g. from landfill gas, sewage treatment, industrial operations, farm)

Please give us feedback by contacting us directly at CEEIRPT@gov.bc.ca

Many local governments have been undertaking a significant amount of climate action in both the corporate and community-wide spheres, as demonstrated in both the public reports from the Climate Action Revenue Incentive Program (CARIP) <a href="http://www.cscd.gov.bc.ca/lgd/greencommunities/carip.htm">http://www.cscd.gov.bc.ca/lgd/greencommunities/carip.htm</a>, and on the <a href="http://toolkit.bc.ca">http://toolkit.bc.ca</a> website. These two resources may be helpful to those who are interested in learning from other BC local governments. The toolkit also contains additional information and resources including decision-support/planning frameworks and tools for undertaking actions to reduce GHG emissions and energy consumption.

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#### **2010 Community Energy and Emissions Inventory**

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

### This is your local government's 2010 Community Energy and Emissions Inventory (CEEI) Report

#### What is a CEEI Report?

CEEI Reports are a result of a multi-agency effort to provide a province-wide solution to assist local governments in BC to track and report on community-wide energy consumption and greenhouse gas (GHG) emissions as well as supporting indicators every two years. CEEI Reports are one of the many resources available through the Climate Action Toolkit (<a href="http://www.toolkit.bc.ca">http://www.toolkit.bc.ca</a>), a web-based service provided through the ongoing collaboration between UBCM and the Province.

#### Why does my local government need a CEEI Report?

A community energy and GHG emissions inventory can be a valuable tool that helps local governments plan and implement GHG and energy management strategies, while at the same time strengthening broader sustainability planning at the local level. CEEI reports fulfill local governments' Climate Action Charter commitment to measure and report their community's GHG emissions profile, establish a base year inventory for local governments to consider as they develop targets, policies, and actions related to BC's Local Government Act requirements, fulfill Milestone One requirements for those local government members of the Federation of Canadian Municipalities' (FCM's) Partners in Climate Protection (PCP) program, as well as supporting local government efforts to monitor progress towards Regional Growth Strategy objectives.

#### A first in North America!

CEEI is a first in North America and a first step for BC communities. The 2010 CEEI Reports are based on best available province-wide data. The accuracy and detail of CEEI reports will continue to improve to meet increasing local and provincial government information needs. Improvements have been made from the original draft 2007 CEEI Reports posted in Spring 2009. These include estimates for residential heating oil, propane and wood use, breaking out small from large industrial buildings, including updated land-use change and new agricultural sectors as 'memo items'. Following the 2010 CEEI Reports, inventories will be generated every two years, and will continue to improve as government information needs, international protocols and new data sources emerge.

#### **For More Information**

The full list of all BC local government 2010 CEEI Reports, User Guide, Technical Methods and Guidance Document, and additional information on the Supporting Indicators are available at: <a href="http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html">http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html</a> For guidance on target setting and community actions, go to <a href="http://www.toolkit.bc.ca">http://www.toolkit.bc.ca</a> and <a href="http://www.cd.gov.bc.ca/lgd/greencommunities/targets.htm">http://www.cd.gov.bc.ca/lgd/greencommunities/targets.htm</a>

#### We Need Your Feedback

To continue to guide us on CEEI, please take the time to contact us directly at <a href="mailto:CEEIRPT@gov.bc.ca">CEEIRPT@gov.bc.ca</a>

#### Notice to the Reader

This CEEI Report uses information from a variety of sources to estimate GHG emissions. While the methodologies, assumptions and data used are intended to provide reasonable estimates of greenhouse gas emissions, the information presented in this report may not be appropriate for all purposes. The Province of BC and the data providers do not provide any warranty to the user or guarantee the accuracy or reliability of the data contained in this report. The user accepts responsibility for the ultimate use of such data. We need your help to make these reports better,