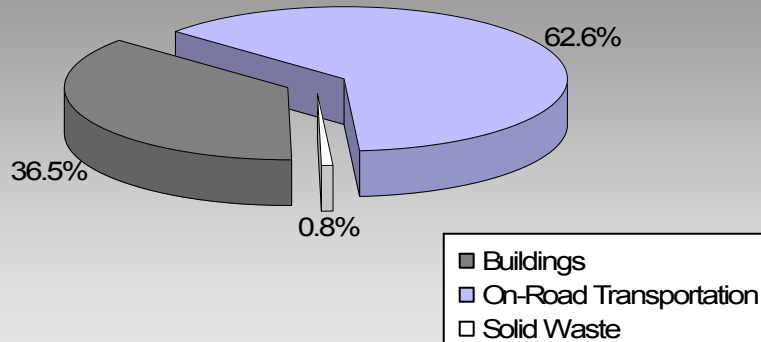


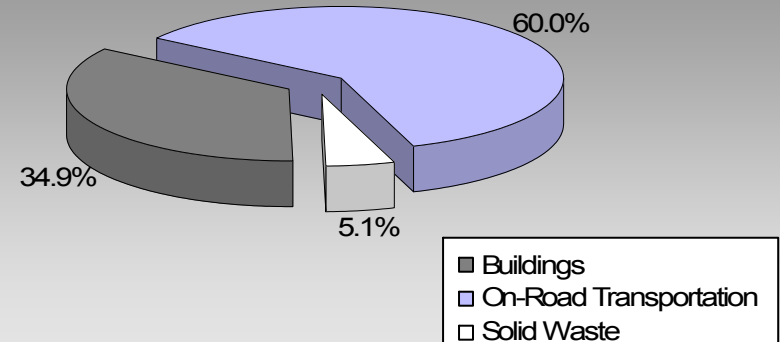
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

Where are the majority of our community's emissions coming from?

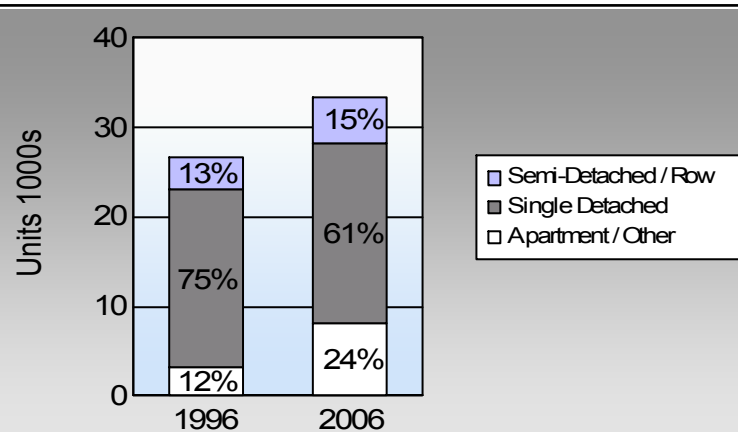
**Langley District Municipality
2007 GHG Emissions Sources**



**Total for BC
Communities**








Are we living more compactly? Housing Type



In BC, single family detached housing made up 49% of housing in 2006.

Are we driving less?

Commute To Work

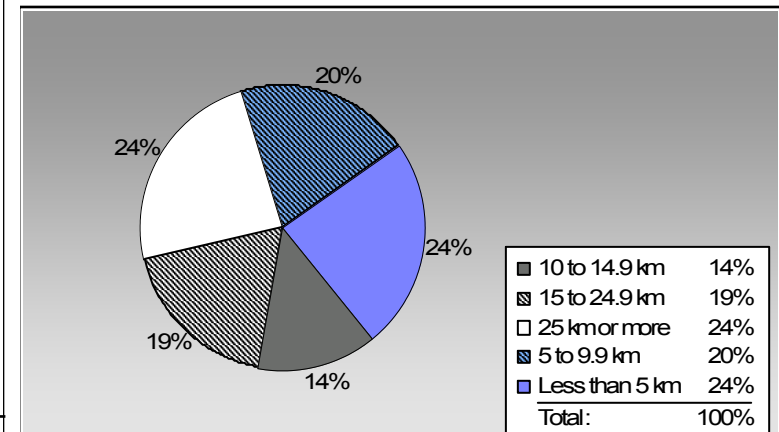
	1996	2006
	87.3%	78.0%
	5.9%	7.8%
	2.5%	6.0%
	3.0%	5.9%
	0.6%	1.3%

In BC, 10% of people took transit, 7% walked, and 2% cycled to work in 2006.

Residential Density

Langley District Municipality: 29.5 people per net ha
BC municipal average: 7.4 people per net ha

Are we living closer to where we work? Commute Distance



In BC, 41% of people lived within 5km of their work in 2006.

Sectors

On Road Transportation		<u>Vehicles</u>	<u>Consumption</u>	<u>Measurement</u>	<u>Average-VKT(km)</u>	<u>Energy (GJ)</u>	<u>CO2e (t)</u>
Small Passenger Cars	Gasoline	20,616	27,679,313	Litres	13,401	968,776	65,827
	Diesel Fuel	697	731,960	Litres	13,654	28,034	1,999
	Other Fuel	< 10	5,798	Litres	10,081	222	9
Small Passenger Cars						997,032	67,835
Large Passenger Cars	Gasoline	10,984	19,339,992	Litres	14,563	676,900	45,815
	Diesel Fuel	300	526,500	Litres	13,948	20,165	1,437
	Other Fuel	23	43,689	Litres	11,179	1,673	67
Large Passenger Cars						698,738	47,319
Light Trucks, Vans, SUVs	Gasoline	26,541	51,163,256	Litres	13,406	1,790,714	122,244
	Diesel Fuel	2,553	5,511,833	Litres	16,489	211,103	15,058
	Other Fuel	156	300,924	Litres	10,767	11,525	461
Light Trucks, Vans, SUVs						2,013,342	137,763
Commercial Vehicles	Gasoline	218	972,120	Litres	15,323	34,024	2,275
	Diesel Fuel	846	3,926,135	Litres	21,395	150,371	10,565
	Other Fuel	39	135,531	Litres	12,753	5,191	208
Commercial Vehicles						189,586	13,048
Tractor Trailer Trucks	Gasoline	28	269,656	Litres	25,759	9,438	634
	Diesel Fuel	1,914	65,870,378	Litres	88,838	2,522,835	177,255
	Other Fuel	< 10	8,927	Litres	7,085	342	14
Tractor Trailer Trucks						2,532,615	177,903
Motorhomes	Gasoline	599	726,451	Litres	3,373	25,426	1,701
	Diesel Fuel	105	118,661	Litres	4,743	4,545	319
	Other Fuel	< 10	7,753	Litres	2,189	297	12
Motorhomes						30,268	2,032
Motorcycles, Mopeds	Gasoline	1,262	548,650	Litres	5,564	19,203	1,281
Motorcycles, Mopeds						19,203	1,281
Bus	Gasoline	47	399,031	Litres	20,196	13,966	938
	Diesel Fuel	66	997,872	Litres	29,334	38,218	2,685
	Other Fuel	< 10	21,945	Litres	15,902	841	34
Bus						53,025	3,657

Langley District Municipality Updated 2007 Community Energy and Emissions Inventory

On Road Transportation Totals	Gasoline:	3,538,447	240,715
	Diesel:	2,975,271	209,318
	Other Fuel:	20,091	805
	All Fuels:	6,533,809	450,838

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Residential	Electricity	34,961	473,022,954	Kilowatt Hours	1,702,881	11,668
	Natural Gas	29,164	2,885,664	GigaJoules	2,885,664	147,169
	Heating Oil		83,523	GigaJoules	83,523	5,888
	Propane		123,548	GigaJoules	123,548	7,538
Residential					4,795,616	172,263
Commercial/Small-Medium Industrial	Electricity	4,943	471,611,986	Kilowatt Hours	1,697,802	11,633
	Natural Gas	2,608	1,553,490	GigaJoules	1,553,490	79,228
Commercial/Small-Medium Industrial					3,251,292	90,861
Buildings Totals	Electricity:				3,400,683	23,301
	Natural Gas:				4,439,154	226,397
	Propane:				123,548	7,538
	Wood:					
	Heating Oil:				83,523	5,888
	Buildings:					8,046,908

Solid Waste	Mass (t)	CO2e (t)
Community Solid Waste	53,638	6,078

Langley District Municipality

Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION	ENERGY (GJ)	CO2e (t)
Diesel Fuel	77,683,339 L	2,975,271	209,318
Electricity	944,634,940 kWh	3,400,683	23,301
Gasoline	101,098,469 L	3,538,447	240,715
Heating Oil	83,523 GJ	83,523	5,888
Natural Gas	4,439,154 GJ	4,439,154	226,397
Other Fuel	524,567 L	20,091	805
Propane	123,548 GJ	123,548	7,538
Solid Waste	53,638 T	0	6,078
Total of Transportation / Buildings / Solid Waste:		14,580,717 GJ	720,040 tonnes

Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	6	withheld	Kilowatt Hours	-	-
	Natural Gas	59	1,721,466	GigaJoules	1,721,466	87,795
Large Industrial					1,721,466	87,795

Supporting Indicators

Below you will find supporting indicators for which data is provided. These are the first five supporting indicators for which data is provided as a part of the updated 2007 CEEI. Columns with all zeros indicate data unavailable in these CEEI reports. Thirteen additional supporting indicators are under consideration for future reports (see next page). Local government feedback is requested on all supporting indicators. Please take the time to complete the short CEEI Survey at <http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html> or contact us directly at CEEIRPT@gov.bc.ca

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	19,995	75	20,890	70	20,210	61
Semi-Detached House	705	3	1,025	3	1,125	3
Row House	2,815	11	2,525	9	3,935	12
Apartment, Duplex	1,070	4	1,345	5	3,605	11
Apartment, 5 storeys or higher	15	0	0	0	0	0
Apartment, under 5 storeys	1,105	4	2,075	7	2,515	8
Other Single Attached House	10	0	90	0	80	0
Movable Dwelling	930	3	1,725	6	1,850	6

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	
	People	%	People	%	People	%
Car, Truck, Van as Driver	31,790	87	35,265	88	8,955	78
Car, Truck, Van as Passenger	2,140	6	2,420	6	890	8
Public Transit	925	3	755	2	690	6
Walked	1,080	3	1,095	3	680	6
Bicycle	215	1	255	1	145	1
Motorcycle	45	0	50	0	40	0
Taxicab	0	0	10	0	10	0
Other Method	240	1	295	1	75	1

Residential Density

* Net of Crown land, parks, Indian Reserves, water features, airports, ALR, waste disposal sites.

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	
Population	103,267.0
Net Land Area (ha) *	7,327.3
Residential Density (people per net ha)	29.5

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	
	People	%
Less than 5 km	9,120	24
5 to 9.9 km	7,595	20
10 to 14.9 km	5,180	14
15 to 24.9 km	7,065	19
25 km or more	9,070	24

Parks and Protected Greenspace

* Total is net of Indian Reserves

** The quantity of parkland may be underestimated

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

	2009	
	Area (ha)	%
National Parks	0.0	0.0
Provincial Parks / Protected Areas	0.0	0.0
Local Parks	1,437.5	4.6
Agricultural Land Reserve	23,420.6	74.3
Other land use	6,656.8	21.1
Total Land Area	31,514.9	100.0

Supporting Indicators Under Consideration

The following supporting indicators are under consideration for inclusion in future CEEI reports. The 2007 CEEI reports provide these 'placeholder' indicators to give indication of data that may be provided in the future by the Province on an ongoing basis to assist in monitoring actions to reduce GHG emissions and energy consumption. Please submit feedback to CEEIRPT@gov.bc.ca (see survey on CEEI website).

On-Road Transportation (and Land Use)

Proximity to Transit	Persons, dwelling units (du) and employment within 400m of a quality transit stop/line
Proximity to Services	Persons and dwelling units (du) within 400m of services (e.g. grocery store, school, other retail etc.)
Transit Ridership	Annual per capita transit ridership

Buildings

Residential; Public Building Energy Intensity	Average energy use per person per square metre of floor space
Floor Space	Average residential dwelling unit size

Solid Waste (and Water)

Waste Diversion	Tonnes of waste diverted
Avoided Waste Emissions	Tonnes of CO ₂ e of avoided future emissions due to reduced waste since 2007
Water Use	Per capita residential water use

Land-Use Change

Impervious Surface Cover	% change in impervious surface cover
Tree Canopy Cover	% change in tree canopy cover

Community and Renewable Energy Supply

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)

This is your local government's Updated 2007 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 every two years. CEEI Reports are one of the many resources available through the Climate Action Toolkit (<http://www.toolkit.bc.ca>), 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, and fulfill Milestone One requirements for those local government members of the Federation of Canadian Municipalities' (FCM's) Partners in Climate Protection (PCP) program.

A first in North America!

CEEI is a first in North America and a first step for BC communities. The 2007 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 and medium from large industrial buildings, including updated land-use change and new agricultural sectors as 'memo items', and the first of a suite of 'supporting indicators'. 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.

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For More Information:

- The full list of all BC local government Updated 2007 CEEI Reports, CEEI Data Summary Report, Technical Methods and Guidance Document, and additional information on the Secondary Indicators are available at: <http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html>.
- For guidance on target setting and community actions, go to <http://www.toolkit.bc.ca> and <http://www.cd.gov.bc.ca/lgd/greencommunities/targets.htm>.

We Need Your Feedback:

- To continue to guide us on CEEI, particularly now with the new Indicators. Please take the time to complete the short CEEI Survey at <http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html> or contact us directly at CEEIRPT@gov.bc.ca

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, where you do note inaccuracies, please contact us.