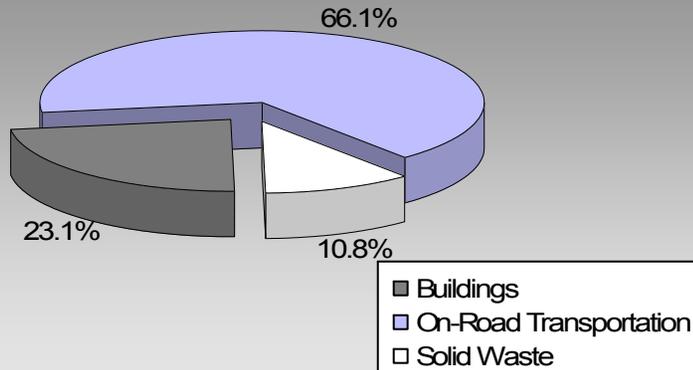


Updated 2007 Community Energy and Emissions Inventory

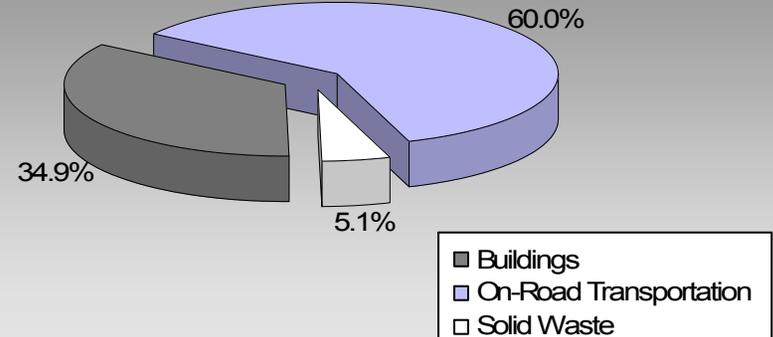
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

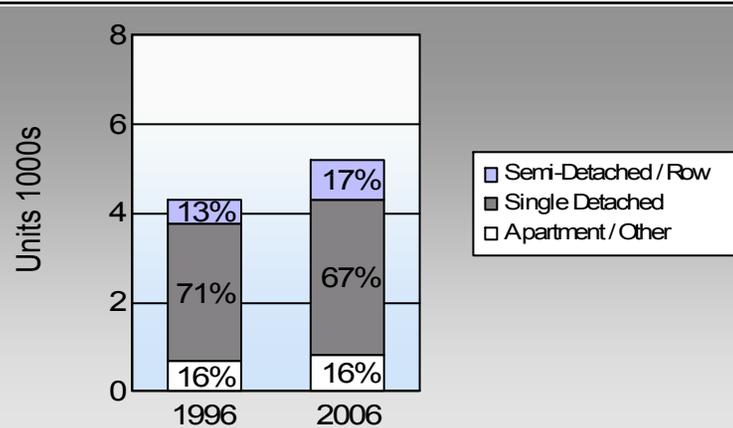
**Comox Town
2007 GHG Emissions Sources**



**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
	75.5%	75.4%
	7.2%	6.7%
	0.6%	2.6%
	9.0%	8.0%
	5.1%	4.9%

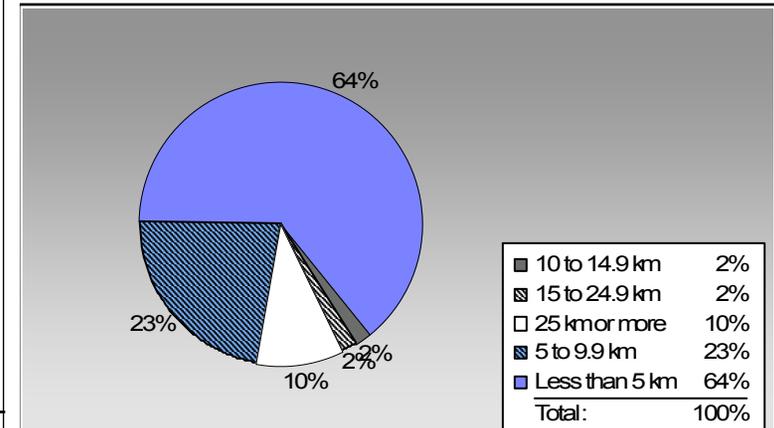
In BC, 10% of people took transit, 7% walked, and 2% cycled to work in 2006.

Residential Density

Comox Town: 9.1 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.

Comox Town

Updated 2007 Community Energy and Emissions Inventory

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	2,701	3,785,700	Litres	14,069	132,500	9,028
	Diesel Fuel	121	130,111	Litres	15,095	4,983	355
	Other Fuel	< 10	2,522	Litres	11,453	97	4
Small Passenger Cars						137,580	9,387
Large Passenger Cars	Gasoline	1,617	3,510,546	Litres	18,469	122,869	8,339
	Diesel Fuel	26	65,814	Litres	19,653	2,521	180
	Other Fuel	< 10	9,443	Litres	14,133	362	14
Large Passenger Cars						125,752	8,533
Light Trucks, Vans, SUVs	Gasoline	3,265	9,683,818	Litres	19,906	338,934	23,181
	Diesel Fuel	213	505,428	Litres	18,537	19,358	1,381
	Other Fuel	18	42,029	Litres	12,761	1,610	64
Light Trucks, Vans, SUVs						359,902	24,626
Commercial Vehicles	Gasoline	12	44,581	Litres	15,301	1,560	105
	Diesel Fuel	32	152,455	Litres	22,301	5,839	410
	Other Fuel	< 10	5,746	Litres	11,356	220	9
Commercial Vehicles						7,619	524
Tractor Trailer Trucks	Diesel Fuel	11	294,573	Litres	69,980	11,282	793
Tractor Trailer Trucks						11,282	793
Motorhomes	Gasoline	114	111,302	Litres	3,012	3,896	260
	Diesel Fuel	< 10	8,587	Litres	4,926	329	23
	Other Fuel	< 10	277	Litres		11	-
Motorhomes						4,236	283
Motorcycles, Mopeds	Gasoline	248	96,514	Litres	5,409	3,378	225
Motorcycles, Mopeds						3,378	225
Bus	Gasoline	< 10	16,545	Litres	19,489	579	39
	Diesel Fuel	20	621,523	Litres	57,020	23,804	1,673
Bus						24,383	1,712

Comox Town

Updated 2007 Community Energy and Emissions Inventory

	Gasoline:	603,716	41,177
	Diesel:	68,116	4,815
	Other Fuel:	2,300	91
On Road Transportation Totals	All Fuels:	674,132	46,083

Buildings	<u>Type</u>	<u>Connections</u>	<u>Consumption</u>	<u>Measurement</u>	<u>Energy (GJ)</u>	<u>CO2e (t)</u>
Residential	Electricity	5,498	72,831,322	Kilowatt Hours	262,193	1,797
	Natural Gas	2,839	137,974	GigaJoules	137,974	7,036
	Heating Oil		80,533	GigaJoules	80,533	5,677
	Propane		13,892	GigaJoules	13,892	848
	Wood		98,158	GigaJoules	98,158	36
Residential					592,750	15,394
Commercial/Small-Medium Industrial	Electricity	431	29,053,246	Kilowatt Hours	104,592	717
	Natural Gas	137		GigaJoules	-	-
Commercial/Small-Medium Industrial					104,592	717
					Electricity:	2,514
					Natural Gas:	7,036
					Propane:	848
					Wood:	36
					Heating Oil:	5,677
Buildings Totals	Buildings:				697,342	16,111

Solid Waste	<u>Mass (t)</u>	<u>CO2e (t)</u>
Community Solid Waste	8,461	7,542

Comox Town

Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION		ENERGY (GJ)	CO2e (t)
Diesel Fuel	1,778,491	L	68,116	4,815
Electricity	101,884,568	kWh	366,785	2,514
Gasoline	17,249,006	L	603,716	41,177
Heating Oil	80,533	GJ	80,533	5,677
Natural Gas	137,974	GJ	137,974	7,036
Other Fuel	60,017	L	2,300	91
Propane	13,892	GJ	13,892	848
Solid Waste	8,461	T	0	7,542
Wood	98,158	GJ	98,158	36
Total of Transportation / Buildings / Solid Waste:			1,371,474 GJ	69,736 tonnes

Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	0	0	Kilowatt Hours	-	-
Large Industrial					-	-

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	3,060	42	3,185	70	3,465	67
Semi-Detached House	330	4	365	8	415	8
Row House	225	3	440	10	480	9
Apartment, Duplex	130	2	15	0	45	1
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	545	7	550	12	735	14
Other Single Attached House	0	0	5	0	0	0
Movable Dwelling	10	0	10	0	50	1

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	3,350	76	3,265	76	3,590	75
Car, Truck, Van as Passenger	320	7	255	6	320	7
Public Transit	25	1	65	2	125	3
Walked	400	9	370	9	380	8
Bicycle	225	5	260	6	235	5
Motorcycle	0	0	20	0	50	1
Taxicab	0	0	0	0	0	0
Other Method	115	3	80	2	60	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	13,444.0
Net Land Area (ha) *	1,481.0
Residential Density (people per net ha)	9.1

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	2,540	64
5 to 9.9 km	895	23
10 to 14.9 km	80	2
15 to 24.9 km	60	2
25 km or more	400	10

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	44.2	2.7
Local Parks	57.8	3.5
Agricultural Land Reserve	76.4	4.6
Other land use	1,476.1	89.2
Total Land Area	1,654.5	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.