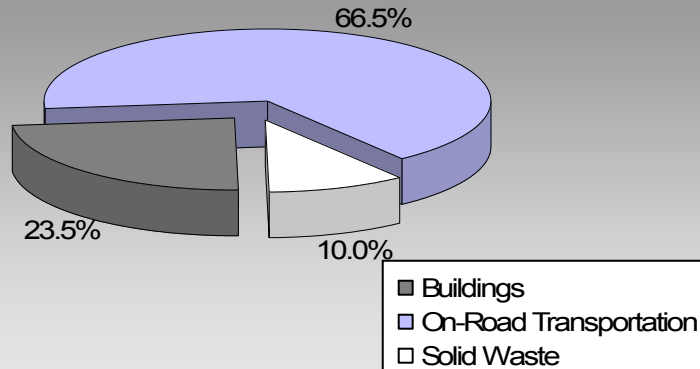


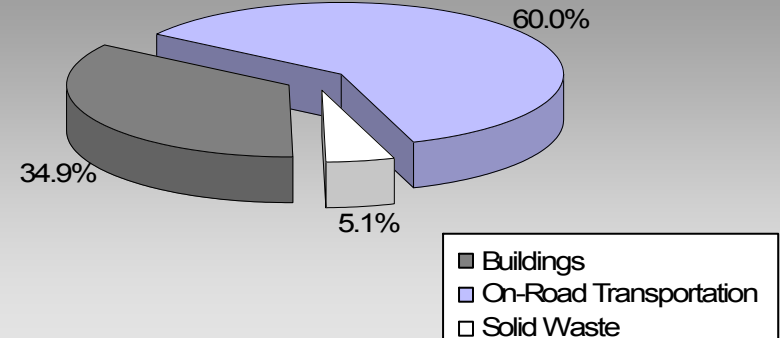
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

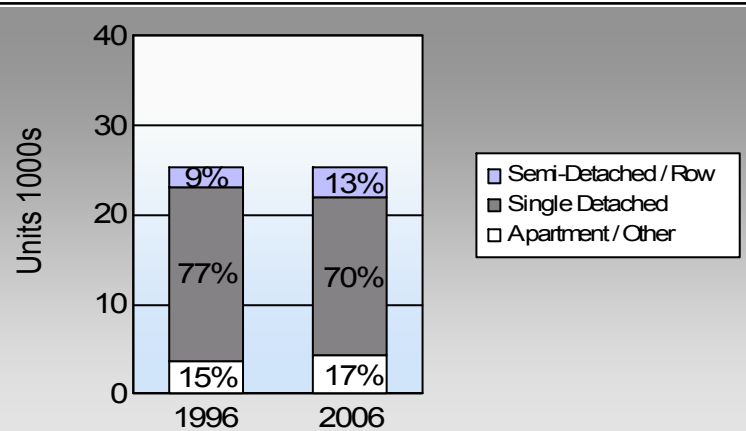
**Comox Valley Regional District
2007 GHG Emissions Sources**



**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
	77.3%	77.9%
	8.1%	7.1%
	1.3%	1.6%
	6.6%	6.8%
	3.1%	3.8%

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

Residential Density

This data is only available for municipalities.
BC municipal average: 7.4 people per net ha

Are we living closer to where we work? Commute Distance

This data is currently unavailable in the CEEI 2007 Reports

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	12,170	16,985,363	Litres	13,801	594,488	40,630
	Diesel Fuel	696	732,116	Litres	14,494	28,040	1,999
	Other Fuel	< 10	5,918	Litres	10,614	227	9
Small Passenger Cars						622,755	42,638
Large Passenger Cars	Gasoline	6,626	14,747,996	Litres	18,386	516,180	35,126
	Diesel Fuel	169	404,053	Litres	18,397	15,475	1,102
	Other Fuel	13	33,445	Litres	14,190	1,281	51
Large Passenger Cars						532,936	36,279
Light Trucks, Vans, SUVs	Gasoline	16,439	48,191,632	Litres	19,533	1,686,707	115,686
	Diesel Fuel	1,672	3,940,713	Litres	18,447	150,929	10,765
	Other Fuel	160	373,986	Litres	13,166	14,324	573
Light Trucks, Vans, SUVs						1,851,960	127,024
Commercial Vehicles	Gasoline	118	486,207	Litres	13,755	17,017	1,136
	Diesel Fuel	319	1,435,765	Litres	20,500	54,990	3,864
	Other Fuel	18	73,399	Litres	12,348	2,811	112
Commercial Vehicles						74,818	5,112
Tractor Trailer Trucks	Gasoline	< 10	40,709	Litres	13,462	1,425	95
	Diesel Fuel	337	7,800,953	Litres	59,546	298,777	20,992
	Other Fuel	< 10	4,166	Litres	7,085	160	6
Tractor Trailer Trucks						300,362	21,093
Motorhomes	Gasoline	527	536,130	Litres	2,867	18,765	1,252
	Diesel Fuel	50	48,937	Litres	4,263	1,874	132
	Other Fuel	< 10	5,399	Litres	2,189	207	8
Motorhomes						20,846	1,392
Motorcycles, Mopeds	Gasoline	1,020	410,904	Litres	5,290	14,382	959
Motorcycles, Mopeds						14,382	959
Bus	Gasoline	28	232,850	Litres	20,942	8,150	547
	Diesel Fuel	32	931,540	Litres	50,871	35,678	2,507
	Other Fuel	< 10	13,167	Litres	15,902	504	20
Bus						44,332	3,074

Comox Valley Regional District Updated 2007 Community Energy and Emissions Inventory

On Road Transportation Totals	Gasoline:	2,857,114	195,431
	Diesel:	585,763	41,361
	Other Fuel:	19,514	779
	All Fuels:	3,462,391	237,571

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Residential	Electricity	28,979	412,912,297	Kilowatt Hours	1,486,483	10,185
	Natural Gas	8,332	397,986	GigaJoules	397,986	20,296
	Heating Oil		414,126	GigaJoules	414,126	29,192
	Propane		71,408	GigaJoules	71,408	4,357
	Wood		505,006	GigaJoules	505,006	187
Residential					2,875,009	64,217
Commercial/Small-Medium Industrial	Electricity	3,298	183,091,818	Kilowatt Hours	659,130	4,516
	Natural Gas	824	298,097	GigaJoules	298,097	15,203
Commercial/Small-Medium Industrial					957,227	19,719
Buildings Totals	Electricity:				2,145,613	14,701
	Natural Gas:				696,083	35,499
	Propane:				71,408	4,357
	Wood:				505,006	187
	Heating Oil:				414,126	29,192
Buildings:					3,832,236	83,936

Solid Waste	Mass (t)	CO2e (t)
Community Solid Waste	37,882	35,618

Comox Valley Regional District Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION		ENERGY (GJ)	CO2e (t)
Diesel Fuel	15,294,077	L	585,763	41,361
Electricity	596,004,115	kWh	2,145,613	14,701
Gasoline	81,631,791	L	2,857,114	195,431
Heating Oil	414,126	GJ	414,126	29,192
Natural Gas	696,083	GJ	696,083	35,499
Other Fuel	509,480	L	19,514	779
Propane	71,408	GJ	71,408	4,357
Solid Waste	37,882	T	0	35,618
Wood	505,006	GJ	505,006	187
Total of Transportation / Buildings / Solid Waste:			7,294,627 GJ	357,125 tonnes

Memo Items

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

Agriculture		Number of Animals	Methane	CO2e (t)
	Enteric Fermentation	9,649	507	10,647

Land-Use Change		Area (ha)	CO2e (t)
	Deforestation from Agriculture	9	6,301
	Deforestation from Settlement	36	32,101
Deforestation:		45	38,402

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	19,405	77	16,630	73	17,585	70
Semi-Detached House	1,330	5	1,685	7	2,095	8
Row House	825	3	1,135	5	1,305	5
Apartment, Duplex	450	2	185	1	420	2
Apartment, 5 storeys or higher	0	0	10	0	10	0
Apartment, under 5 storeys	2,190	9	2,290	10	2,815	11
Other Single Attached House	65	0	90	0	20	0
Movable Dwelling	970	4	855	4	1,015	4

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	19,550	77	16,890	79	18,755	78
Car, Truck, Van as Passenger	2,045	8	1,440	7	1,720	7
Public Transit	325	1	170	1	380	2
Walked	1,660	7	1,440	7	1,645	7
Bicycle	775	3	770	4	910	4
Motorcycle	65	0	65	0	170	1
Taxicab	10	0	0	0	15	0
Other Method	850	3	535	3	490	2

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

This data is currently unavailable in the CEEI 2007 Reports.

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 %

This data is currently unavailable in the CEEI 2007 Reports.

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	14,001.8	8.0
Local Parks	1,219.4	0.7
Agricultural Land Reserve	23,057.3	13.2
Other land use	136,231.4	78.1
Total Land Area	174,509.9	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.