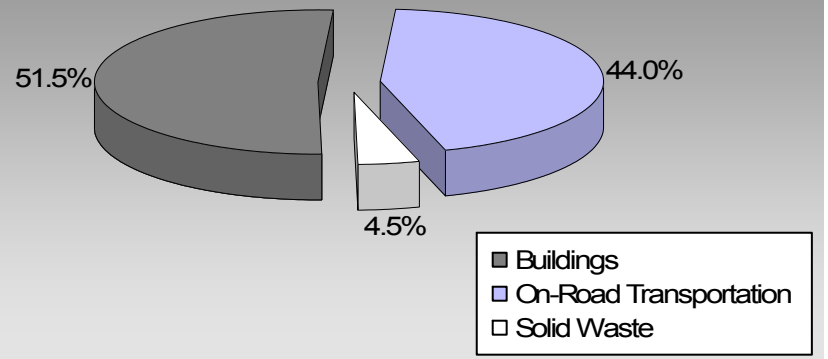
Victoria City
Updated 2007 Community Energy and Emissions Inventory

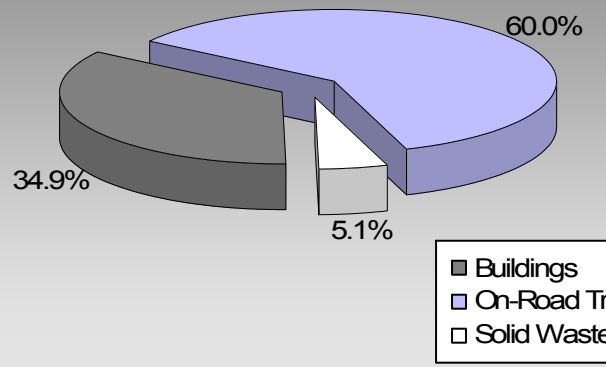
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

Victoria City
2007 GHG Emissions Sources

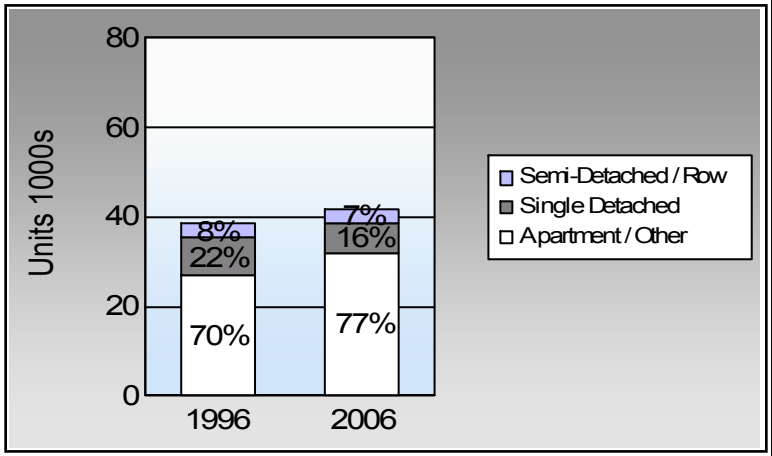


Total for BC Communities



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
	48.6%	47.1%
	5.8%	5.2%
	11.9%	12.6%
	23.4%	23.4%
	8.7%	9.5%

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

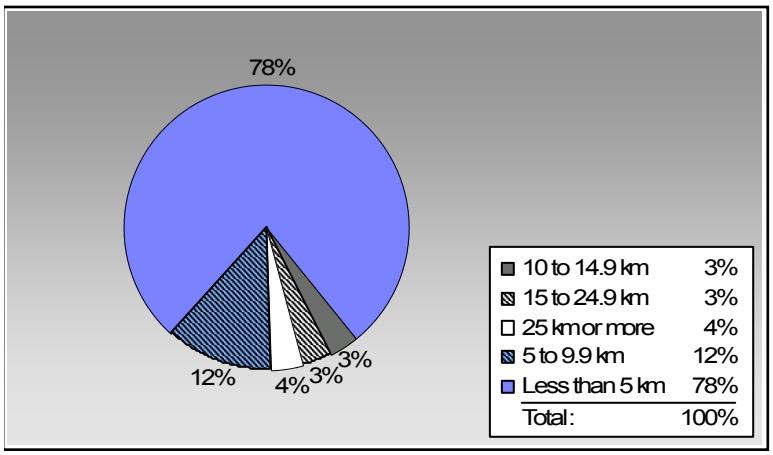
Residential Density

Victoria City: 47.7 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.

For more information and to provide feedback on your Community Energy and Emissions Inventory (CEEI) Report see back page.

Sectors

On Road Transportation		Vehicles	Consumption	Measurement	Average-VKT(km)	Energy (GJ)	CO2e (t)
Small Passenger Cars	Gasoline	19,682	20,553,955	Litres	10,560	719,388	49,225
	Diesel Fuel	507	413,486	Litres	11,197	15,837	1,129
	Other Fuel	< 10	5,490	Litres	7,530	210	8
				Small Passenger Cars		**735,435**	**50,362**
Large Passenger Cars	Gasoline	7,330	10,523,844	Litres	11,881	368,335	25,138
	Diesel Fuel	167	281,263	Litres	12,971	10,772	767
	Other Fuel	31	64,825	Litres	13,094	2,483	99
				Large Passenger Cars		**381,590**	**26,004**
Light Trucks, Vans, SUVs	Gasoline	12,014	20,814,756	Litres	12,034	728,516	49,905
	Diesel Fuel	372	668,628	Litres	13,824	25,608	1,826
	Other Fuel	82	154,142	Litres	10,606	5,904	236
				Light Trucks, Vans, SUVs		**760,028**	**51,967**
Commercial Vehicles	Gasoline	106	339,605	Litres	11,677	11,886	795
	Diesel Fuel	221	691,088	Litres	14,383	26,469	1,860
	Other Fuel	12	38,710	Litres	11,757	1,483	59
				Commercial Vehicles		**39,838**	**2,714**
Tractor Trailer Trucks	Gasoline	< 10	20,069	Litres	9,955	702	47
	Diesel Fuel	223	5,967,398	Litres	71,678	228,551	16,058
	Other Fuel	< 10	4,761	Litres	7,085	182	7
				Tractor Trailer Trucks		**229,435**	**16,112**
Motorhomes	Gasoline	449	359,387	Litres	2,598	12,579	838
	Diesel Fuel	35	37,240	Litres	4,831	1,426	100
	Other Fuel	< 10	4,569	Litres	2,189	175	7
				Motorhomes		**14,180**	**945**
Motorcycles, Mopeds	Gasoline	1,333	461,642	Litres	5,516	16,157	1,078
				Motorcycles, Mopeds		**16,157**	**1,078**
Bus	Gasoline	28	263,060	Litres	22,000	9,207	617
	Diesel Fuel	239	6,988,170	Litres	51,912	267,647	18,806
	Other Fuel	< 10	19,019	Litres	15,902	728	29
				Bus		**277,582**	**19,452**

	Gasoline:	1,866,770	127,643
	Diesel:	576,310	40,546
	Other Fuel:	11,165	445
On Road Transportation Totals	**All Fuels:**	**2,454,245**	**168,634**

Buildings

	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Residential	Electricity	42,954	346,651,102	Kilowatt Hours	1,247,943	8,551
	Natural Gas	6,657	370,252	GigaJoules	370,252	18,883
	Heating Oil		727,127	GigaJoules	727,127	51,255
	Propane		126,492	GigaJoules	126,492	7,717
	Wood		263,404	GigaJoules	263,404	97
			Residential		**2,735,218**	**86,503**
Commercial/Small-Medium Industrial	Electricity	5,880	551,438,558	Kilowatt Hours	1,985,177	13,602
	Natural Gas	1,898	1,908,544	GigaJoules	1,908,544	97,336
			Commercial/Small-Medium Industrial		**3,893,721**	**110,938**

	Electricity:	3,233,120	22,153
	Natural Gas:	2,278,796	116,219
	Propane:	126,492	7,717
	Wood:	263,404	97
	Heating Oil:	727,127	51,255
Buildings Totals	**Buildings:**	**6,628,939**	**197,441**

Solid Waste

	Mass (t)	CO2e (t)
Community Solid Waste	65,835	17,308

Grand Total		CONSUMPTION		ENERGY (GJ)	CO2e (t)
	Diesel Fuel	15,047,273	L	576,310	40,546
	Electricity	898,089,660	kWh	3,233,120	22,153
	Gasoline	53,336,318	L	1,866,770	127,643
	Heating Oil	727,127	GJ	727,127	51,255
	Natural Gas	2,278,796	GJ	2,278,796	116,219
	Other Fuel	291,516	L	11,165	445
	Propane	126,492	GJ	126,492	7,717
	Solid Waste	65,835	T	0	17,308
	Wood	263,404	GJ	263,404	97
Total of Transportation / Buildings / Solid Waste:				**9,083,184** GJ	**383,383** 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	8,420	18	8,715	22	6,600	16
Semi-Detached House	1,120	2	1,225	3	1,065	3
Row House	1,860	4	1,940	5	2,035	5
Apartment, Duplex	2,175	5	2,315	6	3,965	10
Apartment, 5 storeys or higher	5,425	12	5,800	15	6,270	15
Apartment, under 5 storeys	19,225	41	19,420	49	21,675	52
Other Single Attached House	90	0	120	0	95	0
Movable Dwelling	50	0	50	0	30	0

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	82,785.0
Net Land Area (ha) *	1,735.7
Residential Density (people per net ha)	47.7

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	16,455	49	16,990	49	18,420	47
Car, Truck,Van as Passenge	1,955	6	1,565	4	2,030	5
Public Transit	4,015	12	4,195	12	4,945	13
Walked	7,940	23	8,755	25	9,160	23
Bicycle	2,940	9	2,700	8	3,720	10
Motorcycle	180	1	165	0	180	0
Taxicab	70	0	105	0	130	0
Other Method	340	1	385	1	555	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	26,810	78
5 to 9.9 km	4,190	12
10 to 14.9 km	1,125	3
15 to 24.9 km	1,175	3
25 km or more	1,255	4

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	163.7	8.5
Agricultural Land Reserve	0.0	0.0
Other land use	1,772.0	91.5
Total Land Area	1,935.7	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 CO2e 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