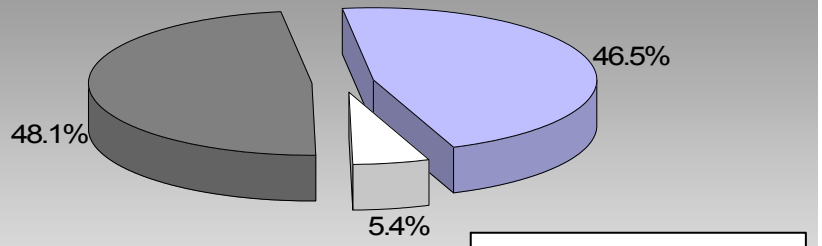
Vancouver City
Updated 2007 Community Energy and Emissions Inventory

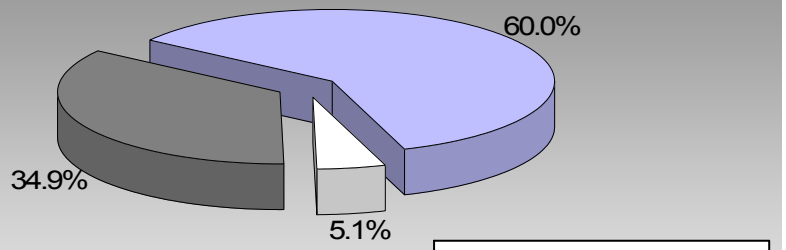
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

Vancouver City 2007 GHG Emissions Sources

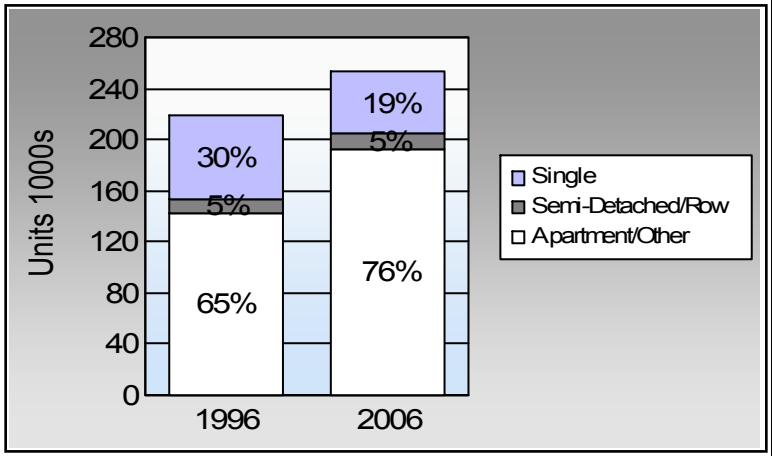


Total for BC Communities



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
	55.1%	51.5%
	6.1%	6.1%
	23.7%	25.1%
	10.7%	12.2%
	3.3%	3.7%

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

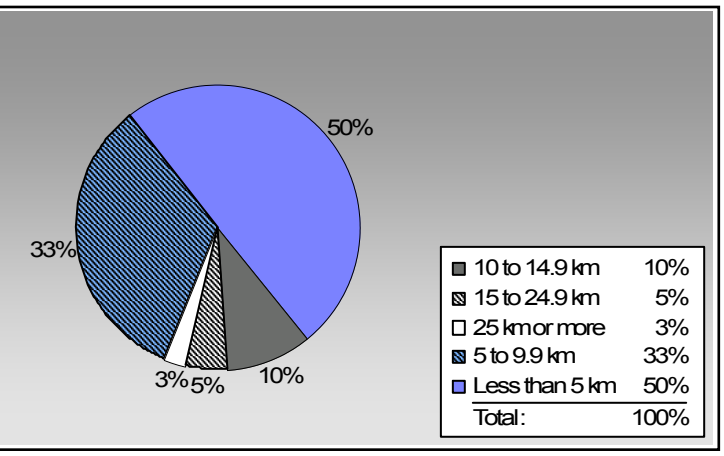
Residential Density

Vancouver City:63 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	124,098	159,667,089	Litres	13,251	5,588,348	379,396
	Diesel Fuel	2,119	2,079,488	Litres	13,345	79,644	5,679
	Other Fuel	12	14,336	Litres	9,500	549	22
				Small Passenger Cars		**5,668,541**	**385,097**
Large Passenger Cars	Gasoline	54,176	92,391,584	Litres	14,729	3,233,705	218,695
	Diesel Fuel	1,382	2,439,704	Litres	13,962	93,441	6,660
	Other Fuel	97	188,032	Litres	11,846	7,202	288
				Large Passenger Cars		**3,334,348**	**225,643**
Light Trucks, Vans, SUVs	Gasoline	87,866	167,038,391	Litres	13,545	5,846,344	398,510
	Diesel Fuel	1,757	4,305,106	Litres	18,346	164,886	11,762
	Other Fuel	311	588,392	Litres	10,925	22,535	901
				Light Trucks, Vans, SUVs		**6,033,765**	**411,173**
Commercial Vehicles	Gasoline	512	2,337,801	Litres	17,137	81,823	5,481
	Diesel Fuel	1,943	8,717,842	Litres	21,172	333,893	23,460
	Other Fuel	104	359,606	Litres	12,832	13,773	551
				Commercial Vehicles		**429,489**	**29,492**
Tractor Trailer Trucks	Gasoline	32	164,123	Litres	15,897	5,744	385
	Diesel Fuel	1,482	45,793,959	Litres	81,155	1,753,909	123,230
	Other Fuel	<10	11,307	Litres	7,085	433	17
				Tractor Trailer Trucks		**1,760,086**	**123,632**
Motorhomes	Gasoline	1,258	79,839	Litres	2,564	2,794	186
	Diesel Fuel	120	2,329	Litres	2,717	89	6
	Other Fuel	24	1,800	Litres	2,189	69	3
				Motorhomes		**2,952**	**195**
Motorcycles, Mopeds	Gasoline	4,370	1,611,389	Litres	5,515	56,399	3,762
				Motorcycles, Mopeds		**56,399**	**3,762**
Bus	Gasoline	203	1,796,747	Litres	23,156	62,886	4,222
	Diesel Fuel	382	7,937,596	Litres	35,760	304,010	21,359
	Other Fuel	37	251,486	Litres	17,341	9,632	385
				Bus		**376,528**	**25,966**

	Gasoline:	14,878,043	1,010,637
	Diesel:	2,729,872	192,156
	Other Fuel:	54,193	2,167
On Road Transportation Totals	**All Fuels:**	**17,662,108**	**1,204,960**

Buildings

	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Residential	Electricity	239,426	1,813,268,028	Kilowatt Hour	6,527,760	44,728
	Natural Gas	91,546	10,505,117	GigaJoules	10,505,117	535,761
	Heating Oil		220,395	GigaJoules	220,395	15,536
	Propane		327,213	GigaJoules	327,213	19,963
			Residential		**17,580,485**	**615,988**
Commercial/Small-Medium Industrial	Electricity	27,170	3,137,202,779	Kilowatt Hour	11,293,921	77,385
	Natural Gas	13,588	10,817,842	GigaJoules	10,817,842	551,710
			Commercial/Small-Medium Industrial		**22,111,763**	**629,095**

	Electricity:	17,821,681	122,113
	Natural Gas:	21,322,959	1,087,471
	Propane:	327,213	19,963
	Wood:		
	Heating Oil:	220,395	15,536
Buildings Totals	**Buildings:**	**39,692,248**	**1,245,083**

Solid Waste

		Mass (t)	CO2e (t)
	Community Solid Waste	386,313	140,567

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Grand Total	CONSUMPTION		ENERGY (GJ)	CO2e (t)
Diesel Fuel	71,276,024	L	2,729,872	192,156
Electricity	4,950,470,807	kWh	17,821,681	122,113
Gasoline	425,086,963	L	14,878,043	1,010,637
Heating Oil	220,395	GJ	220,395	15,536
Natural Gas	21,322,959	GJ	21,322,959	1,087,471
Other Fuel	1,414,959	L	54,193	2,167
Propane	327,213	GJ	327,213	19,963
Solid Waste	386,313	T	0	140,567
Total of Transportation / Buildings / Solid Waste:			**57,354,356** GJ	**2,590,610** tonnes

Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	11	withheld	Kilowatt Hour	-	-
	Natural Gas	242	6,913,969	GigaJoules	6,913,969	352,612
				Large Industrial	**6,913,969**	**352,612**

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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 . 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	65,415	30	65,390	28	48,365	19
Semi-Detached House	3,245	1	3,910	2	3,760	1
Row House	6,935	3	7,295	3	8,230	3
Apartment, Duplex	25,660	12	27,650	12	42,765	17
Apartment, 5 storeys or higher	41,525	19	51,375	22	61,330	24
Apartment, under 5 storeys	75,195	34	79,755	34	88,180	35
Other Single Attached House	455	0	495	0	465	0
Movable Dwelling	105	0	225	0	120	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	628,621.0
Net Land Area (ha) *	9,992.5
Residential Density (people per net ha)	62.9

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	130,345	55	146,525	58	144,480	52
Car, Truck,Van as Passenge	14,460	6	17,065	7	17,150	6
Public Transit	56,030	24	43,625	17	70,475	25
Walked	25,260	11	32,465	13	34,245	12
Bicycle	7,720	3	10,340	4	10,415	4
Motorcycle	540	0	540	0	870	0
Taxicab	605	0	840	0	690	0
Other Method	1,725	1	1,915	1	2,220	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	122,085	50
5 to 9.9 km	82,155	33
10 to 14.9 km	23,955	10
15 to 24.9 km	11,200	5
25 km or more	6,265	3

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	1,141.5	9.8
Agricultural Land Reserve	296.8	2.5
Other land use	10,205.9	87.7
Total Land Area	11,644.2	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