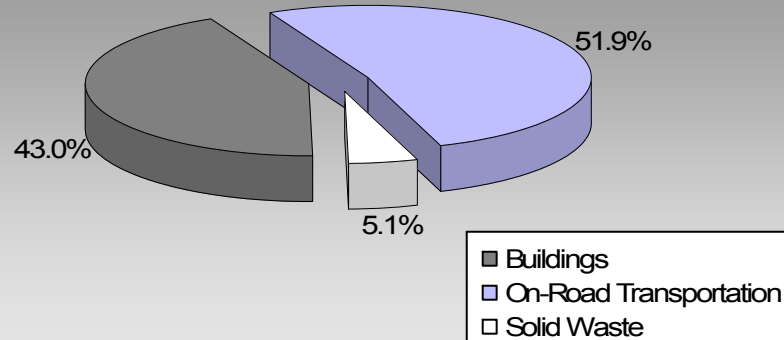


BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

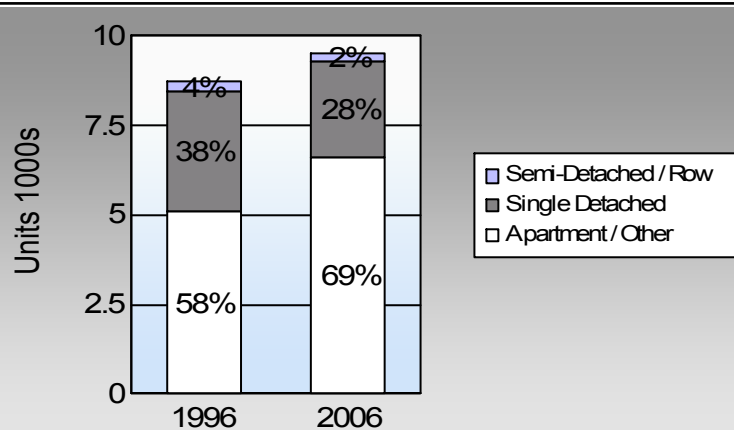
**White Rock City
2007 GHG Emissions Sources**



**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

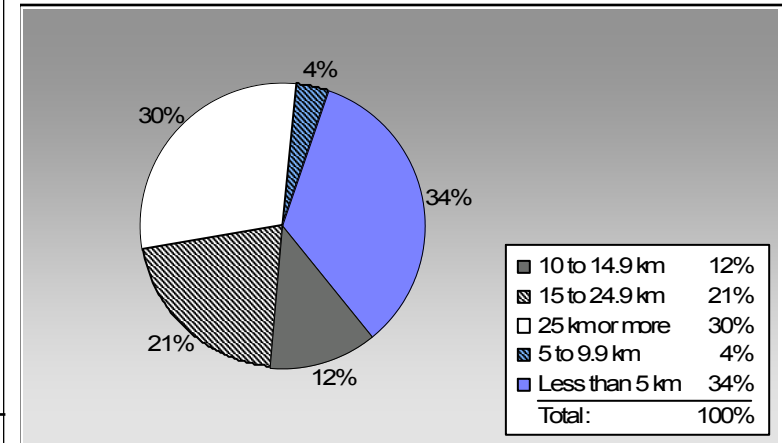
	1996	2006
Car	78.3%	78.3%
Car	4.9%	4.8%
Transit	7.3%	8.3%
Walking	7.6%	6.6%
Bicycling	0.6%	0.3%

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

Residential Density

White Rock City: 39.8 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	5,072	6,485,285	Litres	13,088	226,985	15,411
	Diesel Fuel	145	145,841	Litres	13,488	5,586	398
	Other Fuel	< 10	654	Litres		25	1
Small Passenger Cars						232,596	15,810
Large Passenger Cars	Gasoline	2,802	4,768,550	Litres	14,420	166,899	11,304
	Diesel Fuel	30	47,576	Litres	12,384	1,822	130
	Other Fuel	< 10	8,965	Litres	11,391	343	14
Large Passenger Cars						169,064	11,448
Light Trucks, Vans, SUVs	Gasoline	3,778	7,226,609	Litres	13,454	252,931	17,260
	Diesel Fuel	150	290,878	Litres	15,191	11,141	795
	Other Fuel	12	24,103	Litres	10,722	923	37
Light Trucks, Vans, SUVs						264,995	18,092
Commercial Vehicles	Gasoline	10	38,651	Litres	13,021	1,353	90
	Diesel Fuel	33	166,787	Litres	21,074	6,388	449
	Other Fuel	< 10	1,437	Litres		55	2
Commercial Vehicles						7,796	541
Tractor Trailer Trucks	Diesel Fuel	38	1,020,164	Litres	80,633	39,072	2,745
Tractor Trailer Trucks						39,072	2,745
Motorhomes	Gasoline	101	112,704	Litres	3,308	3,945	264
	Diesel Fuel	< 10	6,867	Litres	5,028	263	18
	Other Fuel	< 10	1,523	Litres	2,189	58	2
Motorhomes						4,266	284
Motorcycles, Mopeds	Gasoline	203	86,286	Litres	5,564	3,020	201
Motorcycles, Mopeds						3,020	201
Bus	Gasoline	11	96,849	Litres	23,180	3,390	228
	Diesel Fuel	< 10	12,226	Litres	15,919	468	33
Bus						3,858	261

White Rock City

Updated 2007 Community Energy and Emissions Inventory

	Gasoline:	658,523	44,758
	Diesel:	64,740	4,568
	Other Fuel:	1,404	56
On Road Transportation Totals	All Fuels:	724,667	49,382

Buildings	<u>Type</u>	<u>Connections</u>	<u>Consumption</u>	<u>Measurement</u>	<u>Energy (GJ)</u>	<u>CO2e (t)</u>	
Residential	Electricity	9,438	76,084,385	Kilowatt Hours	273,904	1,877	
	Natural Gas	4,090	401,187	GigaJoules	401,187	20,461	
	Heating Oil		8,122	GigaJoules	8,122	573	
	Propane		12,049	GigaJoules	12,049	735	
Residential					695,262	23,646	
Commercial/Small-Medium Industrial	Electricity	808	42,106,744	Kilowatt Hours	151,584	1,039	
	Natural Gas	440	318,836	GigaJoules	318,836	16,261	
Commercial/Small-Medium Industrial					470,420	17,300	
					Electricity:	425,488	2,916
					Natural Gas:	720,023	36,722
					Propane:	12,049	735
					Wood:		
					Heating Oil:	8,122	573
Buildings Totals	Buildings:				1,165,682	40,946	

Solid Waste	<u>Mass (t)</u>	<u>CO2e (t)</u>
Community Solid Waste	13,382	4,869

White Rock City

Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION		ENERGY (GJ)	CO2e (t)
Diesel Fuel	1,690,339	L	64,740	4,568
Electricity	118,191,129	kWh	425,488	2,916
Gasoline	18,814,934	L	658,523	44,758
Heating Oil	8,122	GJ	8,122	573
Natural Gas	720,023	GJ	720,023	36,722
Other Fuel	36,682	L	1,404	56
Propane	12,049	GJ	12,049	735
Solid Waste	13,382	T	0	4,869
Total of Transportation / Buildings / Solid Waste:			1,890,349 GJ	95,197 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	3,330	28	3,330	37	2,685	28
Semi-Detached House	145	1	105	1	105	1
Row House	165	1	165	2	130	1
Apartment, Duplex	605	5	760	8	1,490	16
Apartment, 5 storeys or higher	640	5	540	6	780	8
Apartment, under 5 storeys	3,840	32	4,140	46	4,270	45
Other Single Attached House	10	0	35	0	50	1
Movable Dwelling	0	0	0	0	10	0

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	5,545	78	6,170	80	6,315	78
Car, Truck, Van as Passenger	350	5	445	6	385	5
Public Transit	520	7	390	5	670	8
Walked	540	8	595	8	535	7
Bicycle	45	1	50	1	25	0
Motorcycle	10	0	10	0	20	0
Taxicab	10	0	20	0	15	0
Other Method	65	1	60	1	95	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	19,102.0
Net Land Area (ha) *	480.5
Residential Density (people per net ha)	39.8

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	2,285	34
5 to 9.9 km	245	4
10 to 14.9 km	820	12
15 to 24.9 km	1,410	21
25 km or more	1,995	30

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	31.7	6.2
Agricultural Land Reserve	0.0	0.0
Other land use	480.6	93.8
Total Land Area	512.3	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.