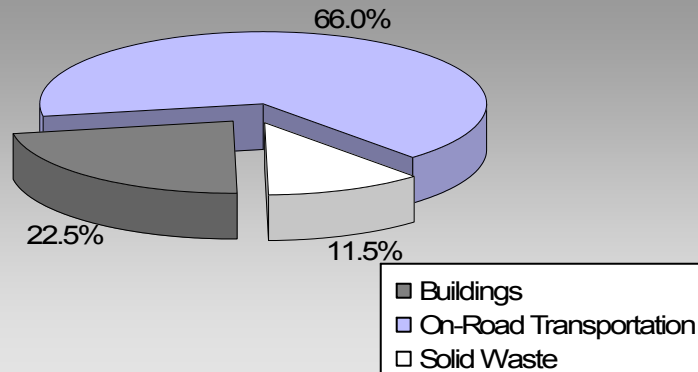


BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

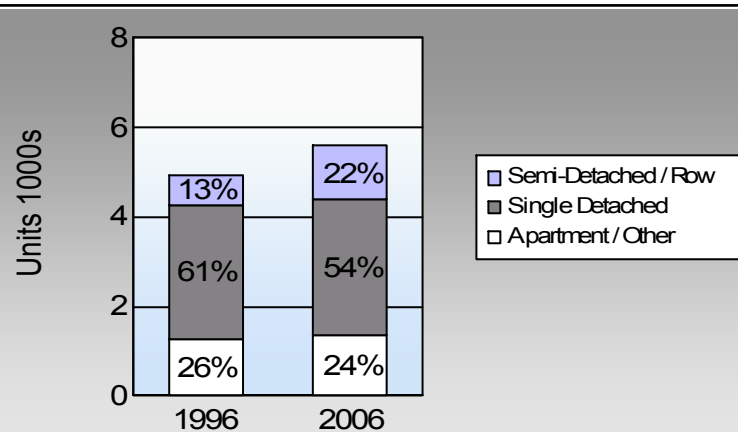
**Squamish District Municipality
2007 GHG Emissions Sources**



**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

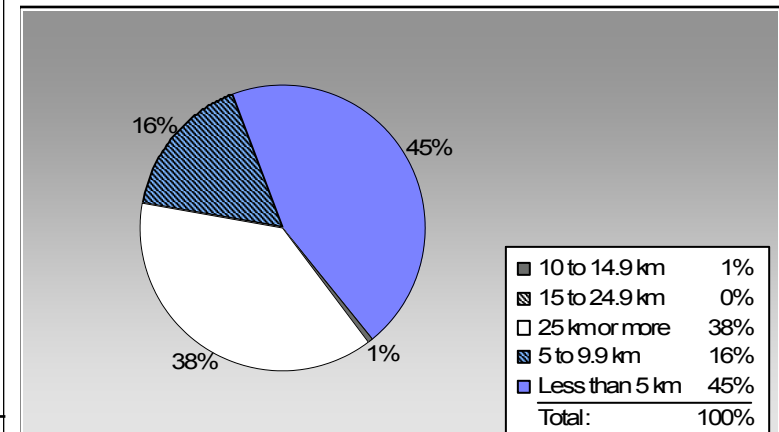
	1996	2006
	74.3%	75.0%
	13.5%	13.3%
	1.7%	2.7%
	5.9%	5.2%
	2.3%	1.9%

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

Residential Density

Squamish District Municipality: 3.1 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.

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	3,285	4,759,020	Litres	14,098	166,566	11,340
	Diesel Fuel	167	182,221	Litres	14,972	6,979	498
Small Passenger Cars						173,545	11,838
Large Passenger Cars	Gasoline	1,441	3,289,348	Litres	18,049	115,127	7,815
	Diesel Fuel	38	94,485	Litres	18,041	3,619	258
	Other Fuel	< 10	9,931	Litres	13,607	380	15
Large Passenger Cars						119,126	8,088
Light Trucks, Vans, SUVs	Gasoline	4,786	14,824,715	Litres	20,454	518,865	35,445
	Diesel Fuel	453	1,203,205	Litres	20,223	46,083	3,287
	Other Fuel	31	78,411	Litres	13,236	3,003	120
Light Trucks, Vans, SUVs						567,951	38,852
Commercial Vehicles	Gasoline	39	181,715	Litres	17,012	6,360	426
	Diesel Fuel	174	816,577	Litres	22,216	31,275	2,197
	Other Fuel	< 10	12,193	Litres	12,072	467	19
Commercial Vehicles						38,102	2,642
Tractor Trailer Trucks	Gasoline	< 10	18,188	Litres	12,794	637	43
	Diesel Fuel	128	3,687,395	Litres	70,992	141,227	9,923
Tractor Trailer Trucks						141,864	9,966
Motorhomes	Gasoline	86	77,801	Litres	2,563	2,723	182
	Diesel Fuel	< 10	8,065	Litres	4,503	309	22
	Other Fuel	< 10	3,046	Litres	2,189	117	5
Motorhomes						3,149	209
Motorcycles, Mopeds	Gasoline	198	84,479	Litres	5,023	2,957	197
Motorcycles, Mopeds						2,957	197
Bus	Gasoline	12	99,544	Litres	19,649	3,484	234
	Diesel Fuel	32	241,050	Litres	18,052	9,232	649
	Other Fuel	< 10	10,241	Litres	15,902	392	16
Bus						13,108	899

Squamish District Municipality

Updated 2007 Community Energy and Emissions Inventory

On Road Transportation Totals	Gasoline:	816,719	55,682
	Diesel:	238,724	16,834
	Other Fuel:	4,359	175
	All Fuels:	1,059,802	72,691

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Residential	Electricity	6,437	95,708,846	Kilowatt Hours	344,552	2,361
	Natural Gas	2,961	189,537	GigaJoules	189,537	9,666
	Heating Oil		3,471	GigaJoules	3,471	245
	Propane		6,130	GigaJoules	6,130	374
	Wood		41,048	GigaJoules	41,048	15
Residential					584,738	12,661
Commercial/Small-Medium Industrial	Electricity	1,126	69,252,196	Kilowatt Hours	249,308	1,708
	Natural Gas	405	204,719	GigaJoules	204,719	10,441
Commercial/Small-Medium Industrial					454,027	12,149
Buildings Totals	Electricity:				593,860	4,069
	Natural Gas:				394,256	20,107
	Propane:				6,130	374
	Wood:				41,048	15
	Heating Oil:				3,471	245
Buildings:					1,038,765	24,810

Solid Waste	Mass (t)	CO2e (t)
Community Solid Waste	15,748	12,626

Squamish District Municipality

Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION		ENERGY (GJ)	CO2e (t)
Diesel Fuel	6,232,998	L	238,724	16,834
Electricity	164,961,042	kWh	593,860	4,069
Gasoline	23,334,810	L	816,719	55,682
Heating Oil	3,471	GJ	3,471	245
Natural Gas	394,256	GJ	394,256	20,107
Other Fuel	113,822	L	4,359	175
Propane	6,130	GJ	6,130	374
Solid Waste	15,748	T	0	12,626
Wood	41,048	GJ	41,048	15
Total of Transportation / Buildings / Solid Waste:			2,098,567 GJ	110,127 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	2,995	38	3,160	61	3,010	54
Semi-Detached House	190	2	250	5	485	9
Row House	455	6	630	12	745	13
Apartment, Duplex	315	4	245	5	195	3
Apartment, 5 storeys or higher	15	0	20	0	0	0
Apartment, under 5 storeys	595	8	625	12	825	15
Other Single Attached House	75	1	30	1	15	0
Movable Dwelling	275	3	195	4	325	6

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	4,950	74	5,320	77	5,890	75
Car, Truck, Van as Passenger	900	14	980	14	1,040	13
Public Transit	110	2	135	2	215	3
Walked	390	6	280	4	410	5
Bicycle	155	2	130	2	145	2
Motorcycle	20	0	10	0	50	1
Taxicab	25	0	10	0	10	0
Other Method	115	2	60	1	90	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	17,181.0
Net Land Area (ha) *	5,623.6
Residential Density (people per net ha)	3.1

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	2,810	45
5 to 9.9 km	1,020	16
10 to 14.9 km	40	1
15 to 24.9 km	0	0
25 km or more	2,375	38

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	2,101.5	19.0
Local Parks	47.7	0.4
Agricultural Land Reserve	801.9	7.3
Other land use	8,088.7	73.3
Total Land Area	11,039.7	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 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.