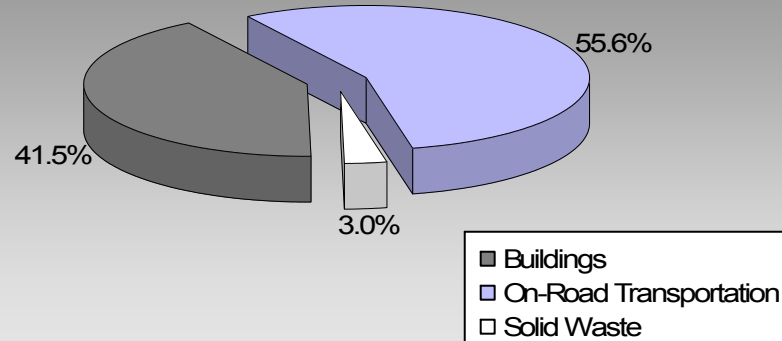


Updated 2007 Community Energy and Emissions Inventory

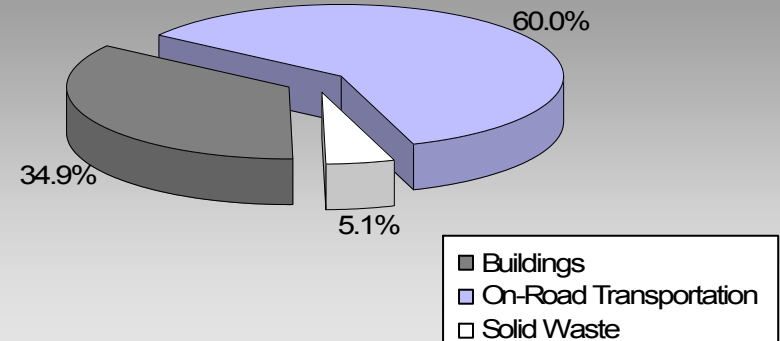
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

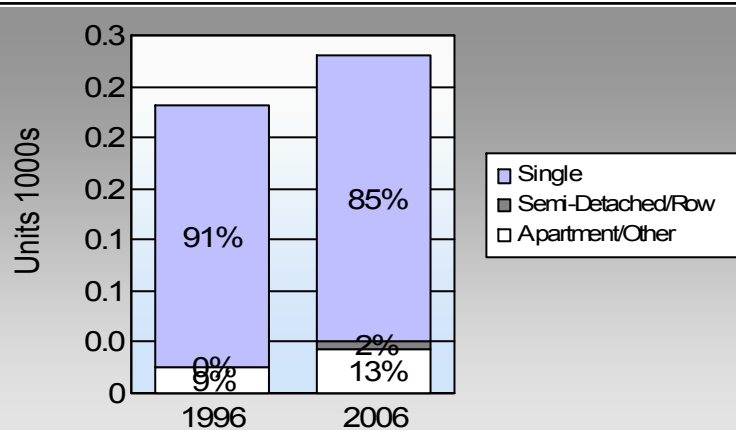
**Belcarra Village
2007 GHG Emissions Sources**



**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
	88.8%	88.7%
	3.8%	0.0%
	0.0%	11.3%
	5.0%	0.0%
	0.0%	0.0%

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

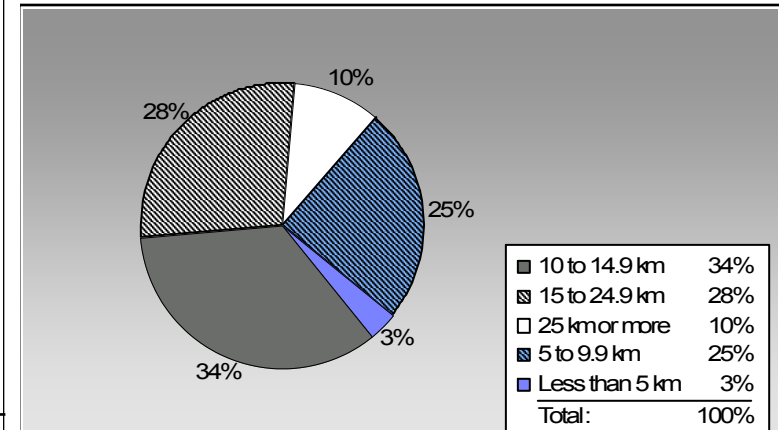
Residential Density

Belcarra Village: 3 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.

Belcarra Village

Updated 2007 Community Energy and Emissions Inventory

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	180	237,347	Litres	13,456	8,307	564
	Diesel Fuel	10	9,913	Litres	13,400	380	27
	Other Fuel	<10	1,004	Litres	10,677	38	2
Small Passenger Cars						8,725	593
Large Passenger Cars	Gasoline	102	184,116	Litres	14,747	6,444	436
	Diesel Fuel	<10	3,856	Litres	14,035	148	11
Large Passenger Cars						6,592	447
Light Trucks, Vans, SUVs	Gasoline	191	374,525	Litres	13,593	13,108	893
	Diesel Fuel	11	20,199	Litres	14,792	774	55
	Other Fuel	<10	3,274	Litres	9,928	125	5
Light Trucks, Vans, SUVs						14,007	953
Commercial Vehicles	Diesel Fuel	<10	18,237	Litres	23,780	698	49
Commercial Vehicles						698	49
Motorhomes	Gasoline	<10	554	Litres		19	1
	Diesel Fuel	<10	withheld	Litres		-	-
Motorhomes						19	1
Motorcycles, Mopeds	Gasoline	10	4,178	Litres	6,016	146	10
Motorcycles, Mopeds						146	10
						Gasoline:	1,904
						Diesel:	142
						Other Fuel:	7
On Road Transportation Totals						All Fuels:	2,053

Belcarra Village

Updated 2007 Community Energy and Emissions Inventory

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)	
Residential	Electricity	271	5,658,230	Kilowatt Hour:	20,370	140	
	Natural Gas	208	26,397	GigaJoules	26,397	1,346	
Residential					46,767	1,486	
Commercial/Small-Medium Industrial	Electricity	25	544,574	Kilowatt Hour:	1,960	13	
	Natural Gas	5	645	GigaJoules	645	33	
Commercial/Small-Medium Industrial					2,605	46	
					Electricity:	22,330	153
					Natural Gas:	27,042	1,379
					Propane:		
					Wood:		
					Heating Oil:		
Buildings Totals					Buildings:	49,372	1,532

Solid Waste	Mass (t)	CO2e (t)
Community Solid Waste	303	110

Grand Total	CONSUMPTION	ENERGY (GJ)	CO2e (t)
Diesel Fuel	52,205 L	2,000	142
Electricity	6,202,804 kWh	22,330	153
Gasoline	800,720 L	28,024	1,904
Natural Gas	27,042 GJ	27,042	1,379
Other Fuel	4,278 L	163	7
Solid Waste	303 T	0	110
Total of Transportation / Buildings / Solid Waste:		79,559 GJ	3,695 tonnes

Belcarra Village

Updated 2007 Community Energy and Emissions Inventory

Memo Items

Buildings	<u>Type</u>	<u>Connections</u>	<u>Consumption</u>	<u>Measurement</u>	<u>Energy (GJ)</u>	<u>CO2e (t)</u>
Large Industrial	Electricity	-	withheld	Kilowatt Hour	-	-
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. 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	205	91	230	90	225	85
Semi-Detached House	0	0	0	0	5	2
Row House	0	0	0	0	0	0
Apartment, Duplex	20	9	25	10	30	11
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	0	0	0	0	0	0
Other Single Attached House	0	0	0	0	0	0
Movable Dwelling	0	0	0	0	5	2

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	355	89	280	79	315	89
Car, Truck, Van as Passenge	15	4	10	3	0	0
Public Transit	0	0	45	13	40	11
Walked	20	5	10	3	0	0
Bicycle	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	0
Taxicab	0	0	0	0	0	0
Other Method	10	3	10	3	0	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	681.0
Net Land Area (ha) *	210.7
Residential Density (people per net ha)	3.2

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	10	3
5 to 9.9 km	75	25
10 to 14.9 km	105	34
15 to 24.9 km	85	28
25 km or more	30	10

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	38.3	7.2
Local Parks	281.3	52.8
Agricultural Land Reserve	0.0	0.0
Other land use	213.4	40.0
Total Land Area	533.0	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.