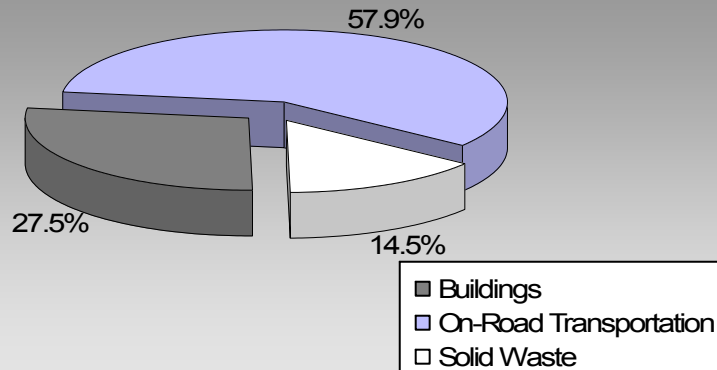


BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

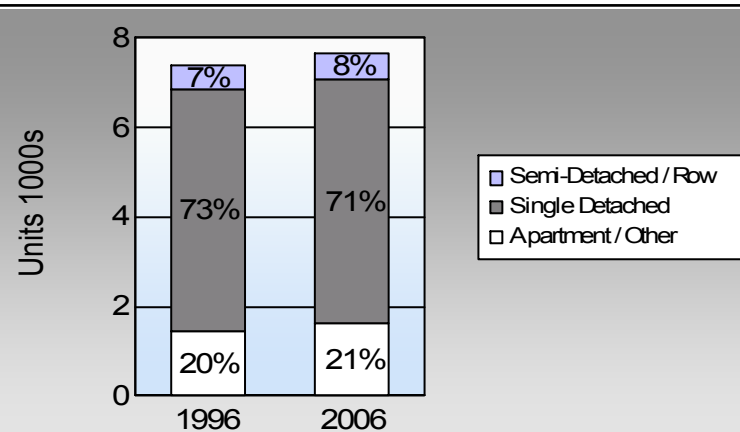
**Port Alberni City
2007 GHG Emissions Sources**



**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

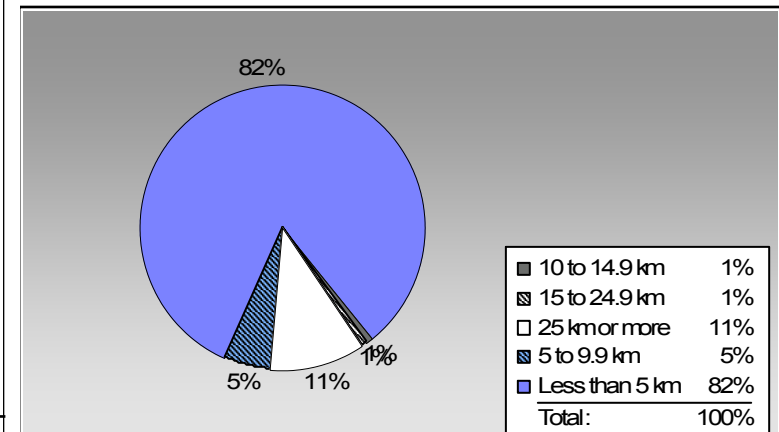
	1996	2006
	79.2%	77.5%
	6.1%	9.8%
	0.9%	1.2%
	9.7%	8.8%
	1.9%	0.8%

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

Residential Density

Port Alberni City: 9.8 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	3,049	4,026,673	Litres	12,959	140,934	9,656
	Diesel Fuel	65	64,271	Litres	13,543	2,462	176
	Other Fuel	< 10	1,769	Litres	8,507	68	3
Small Passenger Cars						143,464	9,835
Large Passenger Cars	Gasoline	1,942	3,971,818	Litres	16,609	139,014	9,483
	Diesel Fuel	25	56,652	Litres	16,771	2,170	155
	Other Fuel	< 10	20,793	Litres	16,561	796	32
Large Passenger Cars						141,980	9,670
Light Trucks, Vans, SUVs	Gasoline	5,315	15,525,980	Litres	19,396	543,409	37,303
	Diesel Fuel	410	945,235	Litres	17,834	36,203	2,582
	Other Fuel	54	129,401	Litres	13,428	4,956	198
Light Trucks, Vans, SUVs						584,568	40,083
Commercial Vehicles	Gasoline	83	406,225	Litres	18,802	14,218	954
	Diesel Fuel	85	385,731	Litres	20,664	14,774	1,038
	Other Fuel	< 10	26,709	Litres	12,033	1,023	41
Commercial Vehicles						30,015	2,033
Tractor Trailer Trucks	Gasoline	< 10	17,493	Litres	12,922	612	41
	Diesel Fuel	112	3,087,329	Litres	73,317	118,245	8,308
Tractor Trailer Trucks						118,857	8,349
Motorhomes	Gasoline	122	126,195	Litres	2,735	4,417	295
	Diesel Fuel	< 10	5,118	Litres	3,701	196	14
	Other Fuel	< 10	4,430	Litres	2,189	170	7
Motorhomes						4,783	316
Motorcycles, Mopeds	Gasoline	144	57,292	Litres	4,659	2,005	134
	Motorcycles, Mopeds						2,005
Bus	Gasoline	< 10	92,015	Litres	26,782	3,221	216
	Diesel Fuel	25	353,997	Litres	28,649	13,558	953
	Other Fuel	< 10	17,556	Litres	15,902	672	27
Bus						17,451	1,196

Port Alberni City

Updated 2007 Community Energy and Emissions Inventory

	Gasoline:	847,830	58,082
	Diesel:	187,608	13,226
	Other Fuel:	7,685	308
On Road Transportation Totals	All Fuels:	1,043,123	71,616

Buildings	<u>Type</u>	<u>Connections</u>	<u>Consumption</u>	<u>Measurement</u>	<u>Energy (GJ)</u>	<u>CO2e (t)</u>
Residential	Electricity	8,066	104,115,006	Kilowatt Hours	374,814	2,568
	Natural Gas	2,225	138,277	GigaJoules	138,277	7,052
	Heating Oil		140,117	GigaJoules	140,117	9,877
	Propane		24,162	GigaJoules	24,162	1,474
	Wood		170,857	GigaJoules	170,857	63
Residential					848,227	21,034
Commercial/Small-Medium Industrial	Electricity	1,110	74,006,898	Kilowatt Hours	266,425	1,826
	Natural Gas	338	219,345	GigaJoules	219,345	11,187
Commercial/Small-Medium Industrial					485,770	13,013
					Electricity:	4,394
					Natural Gas:	18,239
					Propane:	1,474
					Wood:	63
					Heating Oil:	9,877
Buildings Totals	Buildings:				1,333,997	34,047

Solid Waste	<u>Mass (t)</u>	<u>CO2e (t)</u>
Community Solid Waste	15,579	17,960

Port Alberni City

Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION	ENERGY (GJ)	CO2e (t)
Diesel Fuel	4,898,333 L	187,608	13,226
Electricity	178,121,904 kWh	641,239	4,394
Gasoline	24,223,691 L	847,830	58,082
Heating Oil	140,117 GJ	140,117	9,877
Natural Gas	357,622 GJ	357,622	18,239
Other Fuel	200,658 L	7,685	308
Propane	24,162 GJ	24,162	1,474
Solid Waste	15,579 T	0	17,960
Wood	170,857 GJ	170,857	63
Total of Transportation / Buildings / Solid Waste:		2,377,120 GJ	123,623 tonnes

Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	1	withheld	Kilowatt Hours	-	-
	Natural Gas	1	withheld	GigaJoules	-	-
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	5,400	42	5,615	74	5,440	71
Semi-Detached House	205	2	205	3	185	2
Row House	300	2	350	5	390	5
Apartment, Duplex	360	3	140	2	240	3
Apartment, 5 storeys or higher	125	1	105	1	115	2
Apartment, under 5 storeys	820	6	965	13	1,110	15
Other Single Attached House	35	0	30	0	15	0
Movable Dwelling	115	1	155	2	155	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	5,455	79	5,160	81	5,360	77
Car, Truck, Van as Passenger	420	6	525	8	675	10
Public Transit	65	1	95	1	80	1
Walked	665	10	425	7	610	9
Bicycle	130	2	50	1	55	1
Motorcycle	15	0	45	1	15	0
Taxicab	30	0	30	0	0	0
Other Method	110	2	25	0	125	2

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	17,741.0
Net Land Area (ha) *	1,811.9
Residential Density (people per net ha)	9.8

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	4,905	82
5 to 9.9 km	325	5
10 to 14.9 km	55	1
15 to 24.9 km	35	1
25 km or more	630	11

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	45.3	2.3
Agricultural Land Reserve	86.1	4.3
Other land use	1,874.0	93.5
Total Land Area	2,005.4	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.