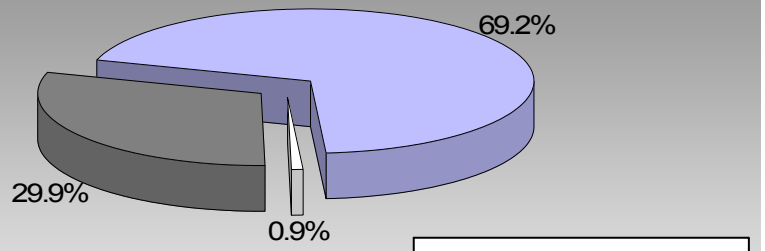
Powell River City
Updated 2007 Community Energy and Emissions Inventory

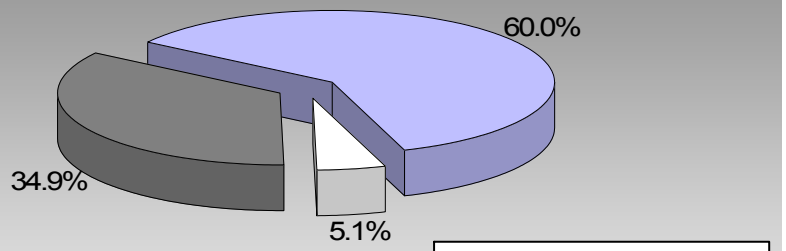
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

Powell River City
2007 GHG Emissions Sources

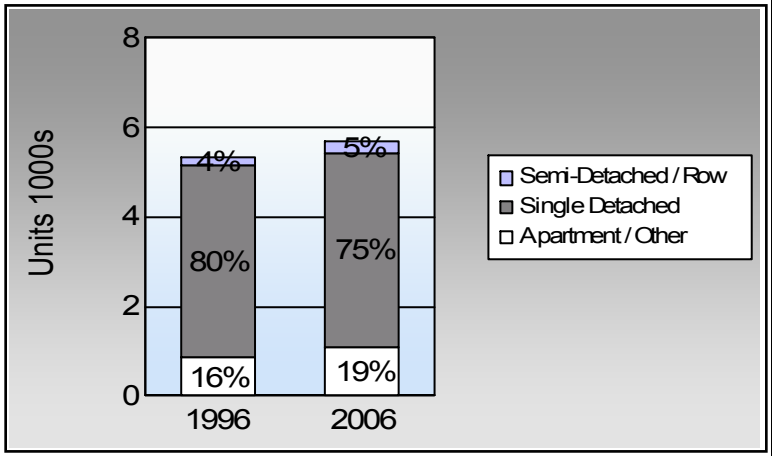


Total for BC Communities



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
	78.8%	79.4%
	6.7%	8.3%
	1.3%	1.5%
	8.2%	7.4%
	3.8%	2.1%

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

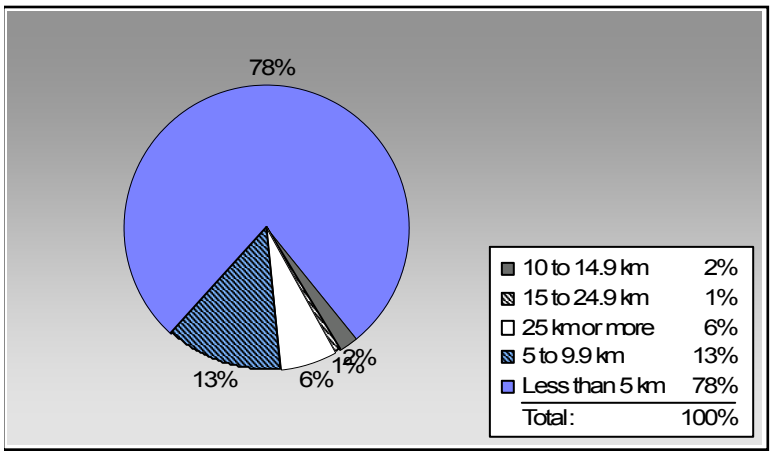
Residential Density

Powell River City: 5.7 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	2,276	2,819,527	Litres	12,377	98,683	6,769
	Diesel Fuel	50	45,717	Litres	12,063	1,751	125
	Other Fuel	< 10	1,000	Litres	10,988	38	2
				Small Passenger Cars		**100,472**	**6,896**
Large Passenger Cars	Gasoline	1,387	2,810,300	Litres	16,480	98,361	6,711
	Diesel Fuel	30	65,678	Litres	17,731	2,515	179
	Other Fuel	< 10	9,995	Litres	13,057	383	15
				Large Passenger Cars		**101,259**	**6,905**
Light Trucks, Vans, SUVs	Gasoline	4,471	12,595,005	Litres	19,167	440,825	30,269
	Diesel Fuel	258	561,373	Litres	16,964	21,501	1,533
	Other Fuel	39	89,888	Litres	13,291	3,443	138
				Light Trucks, Vans, SUVs		**465,769**	**31,940**
Commercial Vehicles	Gasoline	50	209,868	Litres	15,160	7,345	491
	Diesel Fuel	68	312,830	Litres	20,033	11,981	842
	Other Fuel	< 10	15,802	Litres	11,356	605	24
				Commercial Vehicles		**19,931**	**1,357**
Tractor Trailer Trucks	Gasoline	< 10	17,011	Litres	11,703	595	40
	Diesel Fuel	82	1,868,340	Litres	51,896	71,557	5,028
	Other Fuel	< 10	1,785	Litres		68	3
				Tractor Trailer Trucks		**72,220**	**5,071**
Motorhomes	Gasoline	117	115,694	Litres	2,745	4,049	270
	Diesel Fuel	< 10	5,428	Litres	3,606	208	15
	Other Fuel	< 10	1,523	Litres	2,189	58	2
				Motorhomes		**4,315**	**287**
Motorcycles, Mopeds	Gasoline	174	72,137	Litres	5,071	2,525	168
				Motorcycles, Mopeds		**2,525**	**168**
Bus	Gasoline	< 10	81,766	Litres	20,929	2,862	192
	Diesel Fuel	23	312,971	Litres	29,050	11,987	842
	Other Fuel	< 10	2,926	Litres		112	4
				Bus		**14,961**	**1,038**

	Gasoline:	655,245	44,910
	Diesel:	121,500	8,564
	Other Fuel:	4,707	188
On Road Transportation Totals	**All Fuels:**	**781,452**	**53,662**

Buildings

	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Residential	Electricity	6,041	68,682,508	Kilowatt Hours	247,257	1,694
	Natural Gas	2,937	193,158	GigaJoules	193,158	9,851
	Heating Oil		17,938	GigaJoules	17,938	1,264
	Propane		37,865	GigaJoules	37,865	2,310
	Wood		63,405	GigaJoules	63,405	23
			Residential		**559,623**	**15,142**
Commercial/Small-Medium Industrial	Electricity	889	51,286,910	Kilowatt Hours	184,633	1,265
	Natural Gas	286	133,702	GigaJoules	133,702	6,819
			Commercial/Small-Medium Industrial		**318,335**	**8,084**

	Electricity:	431,890	2,959
	Natural Gas:	326,860	16,670
	Propane:	37,865	2,310
	Wood:	63,405	23
	Heating Oil:	17,938	1,264
Buildings Totals	**Buildings:**	**877,958**	**23,226**

Solid Waste

		Mass (t)	CO2e (t)
	Community Solid Waste	3,474	680

Grand Total		CONSUMPTION		ENERGY (GJ)	CO2e (t)
	Diesel Fuel	3,172,337	L	121,500	8,564
	Electricity	119,969,418	kWh	431,890	2,959
	Gasoline	18,721,308	L	655,245	44,910
	Heating Oil	17,938	GJ	17,938	1,264
	Natural Gas	326,860	GJ	326,860	16,670
	Other Fuel	122,919	L	4,707	188
	Propane	37,865	GJ	37,865	2,310
	Solid Waste	3,474	T	0	680
	Wood	63,405	GJ	63,405	23
Total of Transportation / Buildings / Solid Waste:				**1,659,410** GJ	**77,568** 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	4,250	44	4,070	74	4,295	75
Semi-Detached House	130	1	140	3	195	3
Row House	80	1	75	1	95	2
Apartment, Duplex	145	2	225	4	225	4
Apartment, 5 storeys or higher	0	0	0	0	20	0
Apartment, under 5 storeys	670	7	685	13	760	13
Other Single Attached House	20	0	25	0	5	0
Movable Dwelling	45	0	260	5	95	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	13,338.0
Net Land Area (ha) *	2,329.0
Residential Density (people per net ha)	5.7

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	4,170	79	4,120	80	3,990	79
Car, Truck,Van as Passenge	355	7	340	7	415	8
Public Transit	70	1	60	1	75	1
Walked	435	8	470	9	370	7
Bicycle	200	4	135	3	105	2
Motorcycle	15	0	10	0	15	0
Taxicab	10	0	0	0	10	0
Other Method	40	1	45	1	45	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	3,260	78
5 to 9.9 km	560	13
10 to 14.9 km	95	2
15 to 24.9 km	25	1
25 km or more	265	6

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	85.0	2.7
Agricultural Land Reserve	475.0	15.3
Other land use	2,548.1	82.0
Total Land Area	3,108.0	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 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