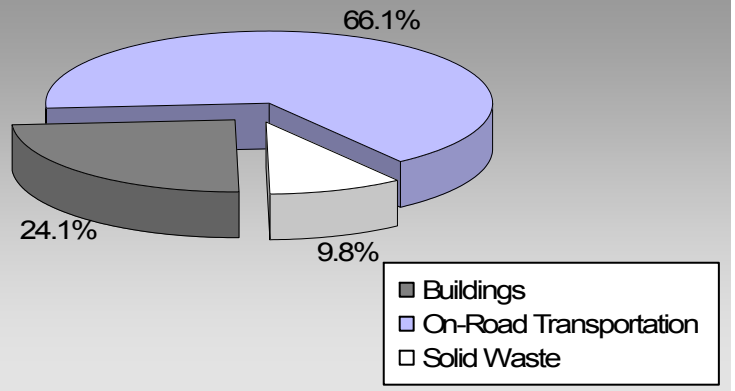
Courtenay City
Updated 2007 Community Energy and Emissions Inventory

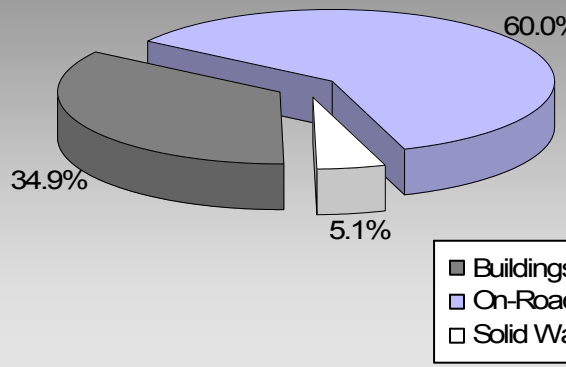
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

Courtenay City
2007 GHG Emissions Sources

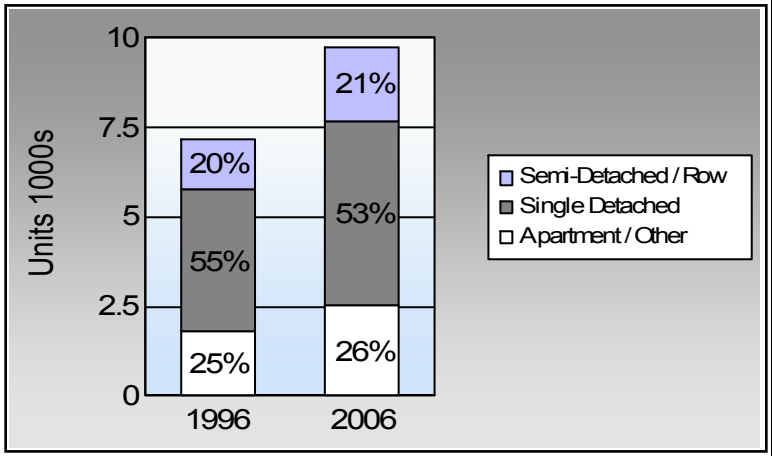


Total for BC Communities



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
	75.5%	74.1%
	9.1%	7.6%
	1.3%	1.4%
	7.8%	9.8%
	3.4%	4.6%

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

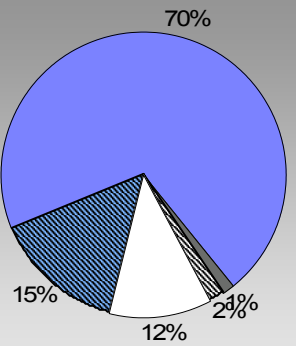
Residential Density

Courtenay City: 10.7 people per net ha

BC municipal average: 7.4 people per net ha

Are we living closer to where we work?

Commute Distance



10 to 14.9 km	1%
15 to 24.9 km	2%
25 km or more	12%
5 to 9.9 km	15%
Less than 5 km	70%
Total:	100%

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	5,165	7,094,957	Litres	13,808	248,323	16,968
	Diesel Fuel	242	250,896	Litres	14,459	9,609	685
	Other Fuel	< 10	1,562	Litres	9,776	60	2
				Small Passenger Cars		**257,992**	**17,655**
Large Passenger Cars	Gasoline	2,724	6,081,204	Litres	18,513	212,842	14,480
	Diesel Fuel	63	151,617	Litres	18,803	5,807	414
	Other Fuel	< 10	10,542	Litres	14,253	404	16
				Large Passenger Cars		**219,053**	**14,910**
Light Trucks, Vans, SUVs	Gasoline	6,206	18,254,547	Litres	19,640	638,909	43,808
	Diesel Fuel	505	1,224,562	Litres	18,843	46,901	3,345
	Other Fuel	58	135,256	Litres	13,525	5,180	207
				Light Trucks, Vans, SUVs		**690,990**	**47,360**
Commercial Vehicles	Gasoline	49	188,542	Litres	13,807	6,599	440
	Diesel Fuel	125	564,687	Litres	20,537	21,628	1,520
	Other Fuel	< 10	32,726	Litres	12,935	1,253	50
				Commercial Vehicles		**29,480**	**2,010**
Tractor Trailer Trucks	Gasoline	< 10	16,612	Litres	12,360	581	39
	Diesel Fuel	148	3,309,718	Litres	59,038	126,762	8,906
	Other Fuel	< 10	3,571	Litres	7,085	137	5
				Tractor Trailer Trucks		**127,480**	**8,950**
Motorhomes	Gasoline	190	204,606	Litres	2,990	7,161	478
	Diesel Fuel	13	15,724	Litres	4,372	602	42
	Other Fuel	< 10	2,354	Litres	2,189	90	4
				Motorhomes		**7,853**	**524**
Motorcycles, Mopeds	Gasoline	383	152,635	Litres	5,428	5,342	356
				Motorcycles, Mopeds		**5,342**	**356**
Bus	Gasoline	17	119,278	Litres	20,508	4,175	280
	Diesel Fuel	< 10	218,549	Litres	46,986	8,370	588
	Other Fuel	< 10	7,315	Litres		280	11
				Bus		**12,825**	**879**

	Gasoline:	1,123,932	76,849
	Diesel:	219,679	15,500
	Other Fuel:	7,404	295
On Road Transportation Totals	**All Fuels:**	**1,351,015**	**92,644**

Buildings

	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Residential	Electricity	10,841	135,818,774	Kilowatt Hours	488,947	3,350
	Natural Gas	4,154	189,777	GigaJoules	189,777	9,678
	Heating Oil		84,984	GigaJoules	84,984	5,991
	Propane		14,672	GigaJoules	14,672	895
	Wood		103,486	GigaJoules	103,486	38
			Residential		**881,866**	**19,952**
Commercial/Small-Medium Industrial	Electricity	1,738	99,430,502	Kilowatt Hours	357,950	2,453
	Natural Gas	559	222,298	GigaJoules	222,298	11,337
			Commercial/Small-Medium Industrial		**580,248**	**13,790**

	Electricity:	846,897	5,803
	Natural Gas:	412,075	21,015
	Propane:	14,672	895
	Wood:	103,486	38
	Heating Oil:	84,984	5,991
Buildings Totals	**Buildings:**	**1,462,114**	**33,742**

Solid Waste

	Mass (t)	CO2e (t)
Community Solid Waste	15,398	13,725

Grand Total		CONSUMPTION		ENERGY (GJ)	CO2e (t)
	Diesel Fuel	5,735,753	L	219,679	15,500
	Electricity	235,249,276	kWh	846,897	5,803
	Gasoline	32,112,381	L	1,123,932	76,849
	Heating Oil	84,984	GJ	84,984	5,991
	Natural Gas	412,075	GJ	412,075	21,015
	Other Fuel	193,326	L	7,404	295
	Propane	14,672	GJ	14,672	895
	Solid Waste	15,398	T	0	13,725
	Wood	103,486	GJ	103,486	38
Total of Transportation / Buildings / Solid Waste:				**2,813,129** GJ	**140,111** 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	3,955	36	4,220	53	5,140	53
Semi-Detached House	905	8	1,185	15	1,340	14
Row House	515	5	615	8	715	7
Apartment, Duplex	165	1	105	1	275	3
Apartment, 5 storeys or higher	0	0	5	0	5	0
Apartment, under 5 storeys	1,505	14	1,615	20	1,920	20
Other Single Attached House	30	0	55	1	10	0
Movable Dwelling	105	1	200	3	340	3

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	24,216.0
Net Land Area (ha) *	2,259.0
Residential Density (people per net ha)	10.7

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	4,965	76	5,395	76	6,745	74
Car, Truck,Van as Passenge	600	9	570	8	690	8
Public Transit	85	1	75	1	125	1
Walked	510	8	620	9	890	10
Bicycle	220	3	270	4	415	5
Motorcycle	15	0	35	0	55	1
Taxicab	0	0	0	0	15	0
Other Method	180	3	165	2	165	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	5,260	70
5 to 9.9 km	1,100	15
10 to 14.9 km	100	1
15 to 24.9 km	125	2
25 km or more	885	12

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	79.1	2.7
Agricultural Land Reserve	589.4	19.9
Other land use	2,290.9	77.4
Total Land Area	2,959.3	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 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