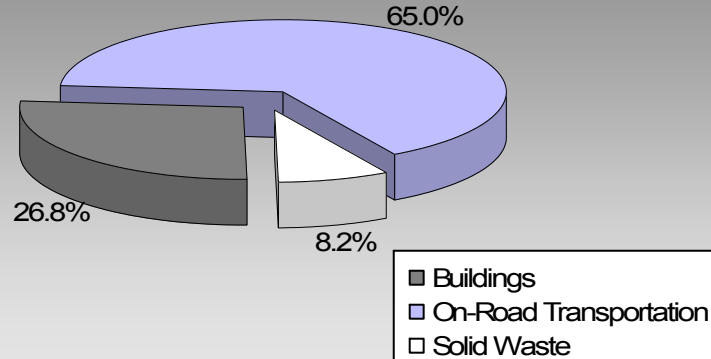


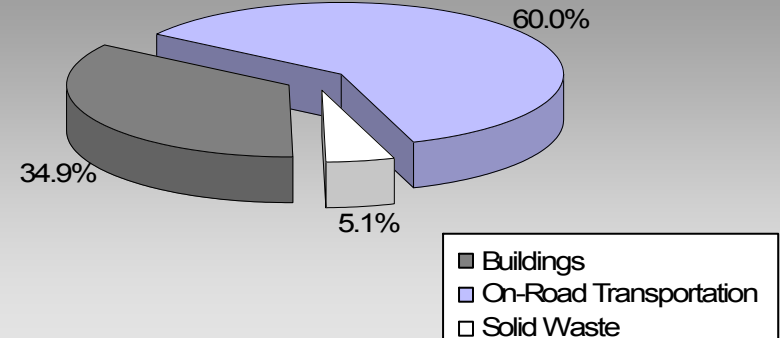
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

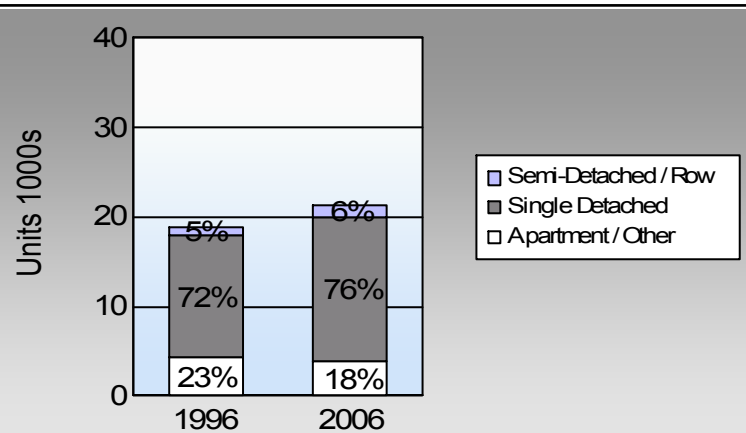
**Columbia-Shuswap Regional District  
2007 GHG Emissions Sources**



**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
	75.3%	78.2%
	8.8%	8.4%
	0.5%	0.6%
	11.0%	8.9%
	2.5%	2.3%

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

### Residential Density

This data is only available for municipalities.  
BC municipal average: 7.4 people per net ha

### Are we living closer to where we work? Commute Distance

This data is currently unavailable in the CEEI 2007 Reports

In BC, 41% of people lived within 5km of their work in 2006.

## Sectors

<b>On Road Transportation</b>		<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	8,192	11,699,981	Litres	13,852	409,499	27,971
	Diesel Fuel	407	430,209	Litres	14,399	16,477	1,175
	Other Fuel	< 10	3,040	Litres	9,761	116	5
<b>Small Passenger Cars</b>						<b>426,092</b>	<b>29,151</b>
Large Passenger Cars	Gasoline	5,332	12,243,934	Litres	17,996	428,538	29,146
	Diesel Fuel	118	298,977	Litres	18,327	11,451	816
	Other Fuel	15	46,220	Litres	14,753	1,770	71
<b>Large Passenger Cars</b>						<b>441,759</b>	<b>30,033</b>
Light Trucks, Vans, SUVs	Gasoline	16,378	50,017,576	Litres	19,522	1,750,615	119,887
	Diesel Fuel	2,175	5,372,612	Litres	19,320	205,771	14,678
	Other Fuel	170	416,775	Litres	13,209	15,963	639
<b>Light Trucks, Vans, SUVs</b>						<b>1,972,349</b>	<b>135,204</b>
Commercial Vehicles	Gasoline	172	783,384	Litres	14,427	27,418	1,832
	Diesel Fuel	461	2,218,230	Litres	21,424	84,958	5,969
	Other Fuel	19	78,744	Litres	12,308	3,016	121
<b>Commercial Vehicles</b>						<b>115,392</b>	<b>7,922</b>
Tractor Trailer Trucks	Gasoline	17	53,647	Litres	9,405	1,878	125
	Diesel Fuel	645	18,158,231	Litres	72,493	695,460	48,863
	Other Fuel	< 10	1,785	Litres		68	3
<b>Tractor Trailer Trucks</b>						<b>697,406</b>	<b>48,991</b>
Motorhomes	Gasoline	365	477,725	Litres	2,941	16,720	1,116
	Diesel Fuel	54	67,026	Litres	4,038	2,567	180
	Other Fuel	< 10	10,345	Litres	2,302	396	16
<b>Motorhomes</b>						<b>19,683</b>	<b>1,312</b>
Motorcycles, Mopeds	Gasoline	441	261,153	Litres	5,183	9,140	610
<b>Motorcycles, Mopeds</b>						<b>9,140</b>	<b>610</b>
Bus	Gasoline	27	308,707	Litres	23,504	10,805	725
	Diesel Fuel	66	697,627	Litres	21,287	26,719	1,877
	Other Fuel	< 10	16,093	Litres	15,902	616	25
<b>Bus</b>						<b>38,140</b>	<b>2,627</b>

# Columbia-Shuswap Regional District

## Updated 2007 Community Energy and Emissions Inventory

	Gasoline:	2,654,613	181,412
	Diesel:	1,043,403	73,558
	Other Fuel:	21,945	880
<b>On Road Transportation Totals</b>	<b>All Fuels:</b>	<b>3,719,961</b>	<b>255,850</b>

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Residential	Electricity	29,526	360,992,651	Kilowatt Hours	1,299,573	8,905
	Natural Gas	9,116	721,690	GigaJoules	721,690	36,806
	Heating Oil		121,504	GigaJoules	121,504	8,565
	Propane		289,871	GigaJoules	289,871	17,685
	Wood		1,072,327	GigaJoules	1,072,327	397
<b>Residential</b>					<b>3,504,965</b>	<b>72,358</b>
Commercial/Small-Medium Industrial	Electricity	4,313	231,092,263	Kilowatt Hours	831,931	5,700
	Natural Gas	918	386,389	GigaJoules	386,389	19,706
	Propane	239	124,436	GigaJoules	124,436	7,592
<b>Commercial/Small-Medium Industrial</b>					<b>1,342,756</b>	<b>32,998</b>
					Electricity:	14,605
					Natural Gas:	56,512
					Propane:	25,277
					Wood:	397
					Heating Oil:	8,565
<b>Buildings Totals</b>	<b>Buildings:</b>				<b>4,847,721</b>	<b>105,356</b>

Solid Waste	Mass (t)	CO2e (t)
Community Solid Waste	43,974	32,116

<b>Grand Total</b>		CONSUMPTION		ENERGY (GJ)	CO2e (t)
	<b>Diesel Fuel</b>	27,242,912	L	1,043,403	73,558
	<b>Electricity</b>	592,084,914	kWh	2,131,504	14,605
	<b>Gasoline</b>	75,846,107	L	2,654,613	181,412
	<b>Heating Oil</b>	121,504	GJ	121,504	8,565
	<b>Natural Gas</b>	1,108,079	GJ	1,108,079	56,512
	<b>Other Fuel</b>	573,002	L	21,945	880
	<b>Propane</b>	414,307	GJ	414,307	25,277
	<b>Solid Waste</b>	43,974	T	0	32,116
	<b>Wood</b>	1,072,327	GJ	1,072,327	397
<b>Total of Transportation / Buildings / Solid Waste:</b>				<b>8,567,682 GJ</b>	<b>393,322 tonnes</b>

## Memo Items

<b>Buildings</b>	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	5	80,817,890	Kilowatt Hours	290,944	1,994
	Natural Gas	5	withheld	GigaJoules	-	-
<b>Large Industrial</b>					<b>290,944</b>	<b>1,994</b>

<b>Agriculture</b>		Number of Animals	Methane	CO2e (t)
	Enteric Fermentation	23,665	1,369	28,749

<b>Land-Use Change</b>		Area (ha)	CO2e (t)
	Deforestation from Agriculture	71	32,546
	Deforestation from Settlement	224	107,368
<b>Deforestation:</b>		<b>295</b>	<b>139,914</b>

## 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](mailto: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	13,560	42	15,020	75	16,095	76
Semi-Detached House	380	1	320	2	460	2
Row House	610	2	770	4	785	4
Apartment, Duplex	510	2	425	2	550	3
Apartment, 5 storeys or higher	0	0	5	0	5	0
Apartment, under 5 storeys	1,345	4	1,365	7	1,670	8
Other Single Attached House	70	0	145	1	50	0
Movable Dwelling	2,380	7	1,855	9	1,560	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	13,840	75	15,060	80	16,355	78
Car, Truck, Van as Passenger	1,615	9	1,230	7	1,765	8
Public Transit	85	0	90	0	120	1
Walked	2,025	11	1,710	9	1,870	9
Bicycle	455	2	475	3	490	2
Motorcycle	40	0	30	0	75	0
Taxicab	0	0	10	0	15	0
Other Method	310	2	245	1	215	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

This data is currently unavailable in the CEEI 2007 Reports.

### 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 %

This data is currently unavailable in the CEEI 2007 Reports.

### 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	295,109.8	9.9
Provincial Parks / Protected Areas	97,068.0	3.3
Local Parks	184.6	0.0
Agricultural Land Reserve	54,603.7	1.8
Other land use	2,542,509.9	85.1
<b>Total Land Area</b>	<b>2,989,476.0</b>	<b>100.0</b>

## 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](mailto:CEEIRPT@gov.bc.ca) (see survey on CEEI website).

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### 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

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### Buildings

Residential; Public Building Energy Intensity	Average energy use per person per square metre of floor space
Floor Space	Average residential dwelling unit size

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### Solid Waste (and Water)

Waste Diversion	Tonnes of waste diverted
Avoided Waste Emissions	Tonnes of CO <sub>2</sub> e of avoided future emissions due to reduced waste since 2007
Water Use	Per capita residential water use

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### Land-Use Change

Impervious Surface Cover	% change in impervious surface cover
Tree Canopy Cover	% change in tree canopy cover

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### 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)

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# 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](mailto: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.