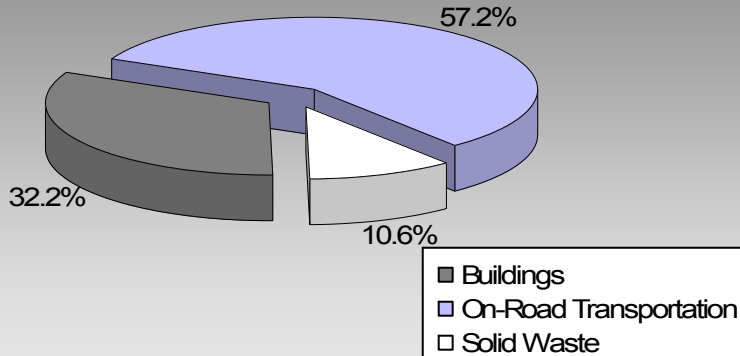


## Updated 2007 Community Energy and Emissions Inventory

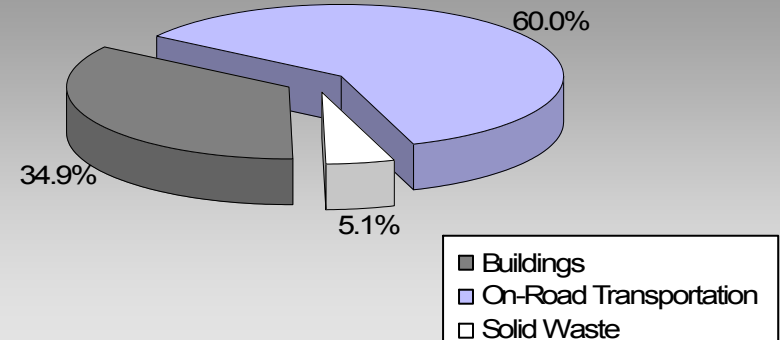
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

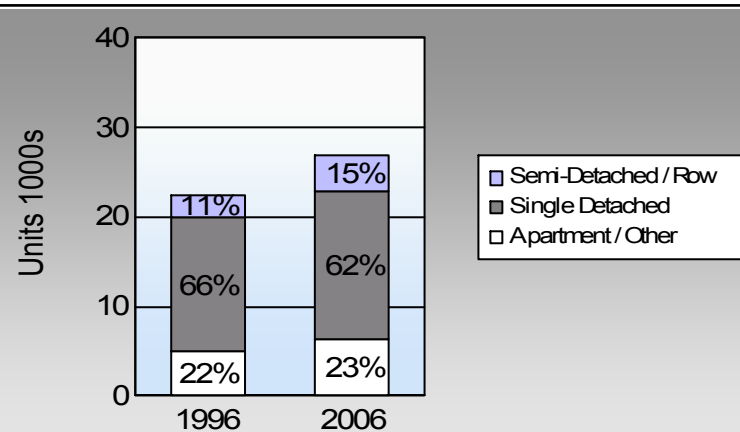
**Chilliwack City  
2007 GHG Emissions Sources**



**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
	81.4%	82.6%
	7.1%	9.4%
	0.8%	1.1%
	5.9%	4.4%
	3.2%	1.3%

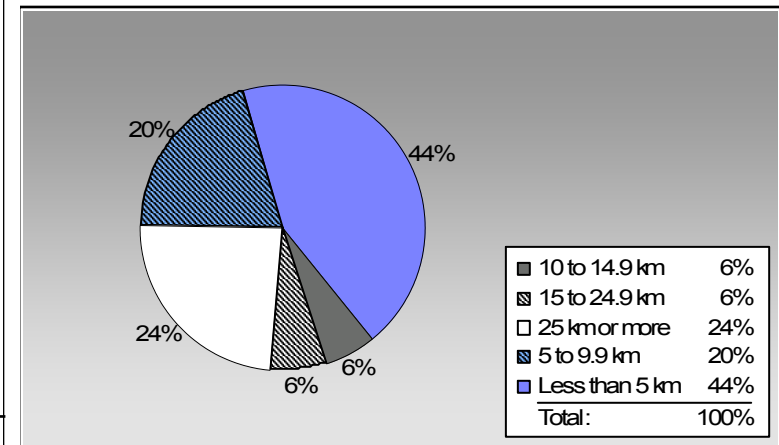
In BC, 10% of people took transit, 7% walked, and 2% cycled to work in 2006.

#### Residential Density

Chilliwack City: 9.9 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

<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	14,337	21,136,023	Litres	14,902	739,761	50,337
	Diesel Fuel	633	734,515	Litres	15,736	28,132	2,006
	Other Fuel	< 10	2,960	Litres	11,310	113	5
<b>Small Passenger Cars</b>						<b>768,006</b>	<b>52,348</b>
Large Passenger Cars	Gasoline	7,771	17,189,155	Litres	18,228	601,620	40,791
	Diesel Fuel	128	287,670	Litres	18,155	11,018	785
	Other Fuel	16	49,549	Litres	14,927	1,898	76
<b>Large Passenger Cars</b>						<b>614,536</b>	<b>41,652</b>
Light Trucks, Vans, SUVs	Gasoline	18,146	56,004,860	Litres	21,027	1,960,170	133,843
	Diesel Fuel	1,602	4,195,962	Litres	20,246	160,705	11,463
	Other Fuel	125	306,573	Litres	13,830	11,742	470
<b>Light Trucks, Vans, SUVs</b>						<b>2,132,617</b>	<b>145,776</b>
Commercial Vehicles	Gasoline	136	549,210	Litres	13,892	19,222	1,283
	Diesel Fuel	384	1,819,731	Litres	21,265	69,696	4,897
	Other Fuel	22	75,404	Litres	12,418	2,888	116
<b>Commercial Vehicles</b>						<b>91,806</b>	<b>6,296</b>
Tractor Trailer Trucks	Gasoline	< 10	26,409	Litres	14,135	924	62
	Diesel Fuel	558	16,485,339	Litres	77,159	631,388	44,362
	Other Fuel	< 10	2,380	Litres	7,085	91	4
<b>Tractor Trailer Trucks</b>						<b>632,403</b>	<b>44,428</b>
Motorhomes	Gasoline	489	565,340	Litres	3,210	19,787	1,323
	Diesel Fuel	80	78,586	Litres	4,435	3,010	211
	Other Fuel	< 10	7,199	Litres	2,189	276	11
<b>Motorhomes</b>						<b>23,073</b>	<b>1,545</b>
Motorcycles, Mopeds	Gasoline	851	341,991	Litres	5,364	11,970	798
<b>Motorcycles, Mopeds</b>						<b>11,970</b>	<b>798</b>
Bus	Gasoline	39	385,543	Litres	23,379	13,494	907
	Diesel Fuel	50	600,829	Litres	23,736	23,012	1,617
	Other Fuel	15	86,318	Litres	15,902	3,306	132
<b>Bus</b>						<b>39,812</b>	<b>2,656</b>

# Chilliwack City

## Updated 2007 Community Energy and Emissions Inventory

	Gasoline:	3,366,948	229,344
	Diesel:	926,961	65,341
	Other Fuel:	20,314	814
<b>On Road Transportation Totals</b>	<b>All Fuels:</b>	<b>4,314,223</b>	<b>295,499</b>

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Residential	Electricity	29,721	345,559,155	Kilowatt Hours	1,244,012	8,524
	Natural Gas	22,876	1,790,094	GigaJoules	1,790,094	91,295
<b>Residential</b>					<b>3,034,106</b>	<b>99,819</b>
Commercial/Small-Medium Industrial	Electricity	3,346	264,527,150	Kilowatt Hours	952,297	6,525
	Natural Gas	2,230	1,170,603	GigaJoules	1,170,603	59,701
<b>Commercial/Small-Medium Industrial</b>					<b>2,122,900</b>	<b>66,226</b>
					Electricity:	15,049
					Natural Gas:	150,996
					Propane:	
					Wood:	
					Heating Oil:	
<b>Buildings Totals</b>				<b>Buildings:</b>	<b>5,157,006</b>	<b>166,045</b>

Solid Waste	Mass (t)	CO2e (t)
Community Solid Waste	34,117	54,920

# Chilliwack City

## Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION	ENERGY (GJ)	CO2e (t)
Diesel Fuel	24,202,632 L	926,961	65,341
Electricity	610,086,305 kWh	2,196,309	15,049
Gasoline	96,198,531 L	3,366,948	229,344
Natural Gas	2,960,697 GJ	2,960,697	150,996
Other Fuel	530,383 L	20,314	814
Solid Waste	34,117 T	0	54,920
<b>Total of Transportation / Buildings / Solid Waste:</b>		<b>9,471,229 GJ</b>	<b>516,464 tonnes</b>

### Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	0	0	Kilowatt Hours	-	-
	Natural Gas	23	378,067	GigaJoules	378,067	19,281
<b>Large Industrial</b>					<b>378,067</b>	<b>19,281</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	14,910	40	15,890	66	16,670	62
Semi-Detached House	720	2	720	3	935	3
Row House	1,850	5	2,200	9	3,025	11
Apartment, Duplex	265	1	440	2	605	2
Apartment, 5 storeys or higher	150	0	140	1	235	1
Apartment, under 5 storeys	4,220	11	4,600	19	5,135	19
Other Single Attached House	55	0	35	0	30	0
Movable Dwelling	320	1	215	1	235	1

#### 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	18,765	81	21,025	85	24,730	83
Car, Truck, Van as Passenger	1,640	7	1,665	7	2,820	9
Public Transit	185	1	275	1	340	1
Walked	1,350	6	1,105	4	1,315	4
Bicycle	740	3	410	2	385	1
Motorcycle	110	0	0	0	35	0
Taxicab	35	0	0	0	65	0
Other Method	240	1	215	1	240	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	
Population	76,106.0
Net Land Area (ha) *	7,727.4
Residential Density (people per net ha)	9.9

#### 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	10,900 44
5 to 9.9 km	5,090 20
10 to 14.9 km	1,490 6
15 to 24.9 km	1,580 6
25 km or more	5,960 24

### 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	674.9	2.4
Local Parks	304.0	1.1
Agricultural Land Reserve	17,122.8	61.3
Other land use	9,855.0	35.3
Total Land Area	27,956.7	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](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.