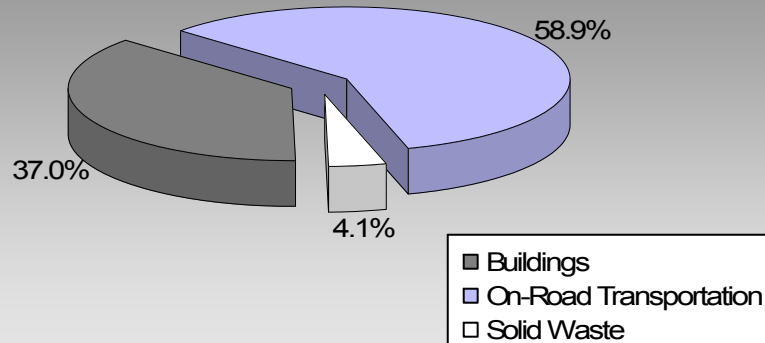


**Updated 2007 Community Energy and Emissions Inventory**

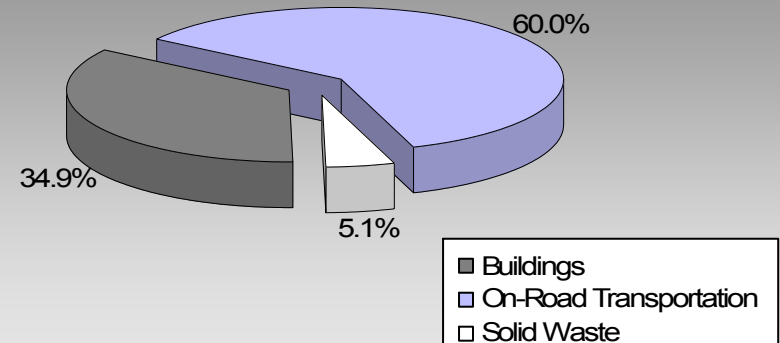
*BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities*

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

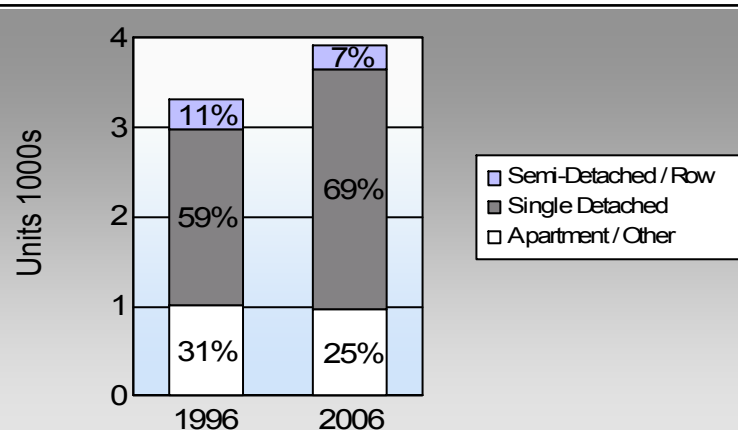
**Quesnel City  
2007 GHG Emissions Sources**



**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**

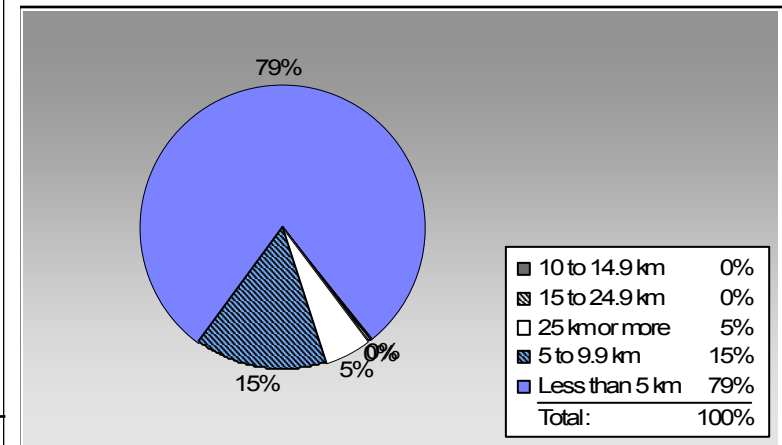
	1996	2006
	75.0%	80.7%
	10.0%	6.9%
	0.0%	1.7%
	13.6%	7.6%
	0.9%	1.7%

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

**Residential Density**

Quesnel City: 5.6 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	1,620	2,368,824	Litres	14,405	82,909	5,664
	Diesel Fuel	36	42,973	Litres	15,153	1,646	117
<b>Small Passenger Cars</b>						<b>84,555</b>	<b>5,781</b>
Large Passenger Cars	Gasoline	1,037	2,461,063	Litres	19,012	86,137	5,848
	Diesel Fuel	17	44,556	Litres	18,369	1,706	122
	Other Fuel	< 10	7,704	Litres	15,615	295	12
<b>Large Passenger Cars</b>						<b>88,138</b>	<b>5,982</b>
Light Trucks, Vans, SUVs	Gasoline	3,244	10,448,256	Litres	20,253	365,689	25,030
	Diesel Fuel	376	1,013,824	Litres	21,073	38,829	2,770
	Other Fuel	21	59,022	Litres	12,761	2,261	90
<b>Light Trucks, Vans, SUVs</b>						<b>406,779</b>	<b>27,890</b>
Commercial Vehicles	Gasoline	27	136,246	Litres	14,856	4,769	319
	Diesel Fuel	67	382,074	Litres	21,745	14,633	1,028
	Other Fuel	< 10	1,437	Litres		55	2
<b>Commercial Vehicles</b>						<b>19,457</b>	<b>1,349</b>
Tractor Trailer Trucks	Gasoline	< 10	5,356	Litres	7,085	187	12
	Diesel Fuel	154	5,044,438	Litres	83,023	193,202	13,574
<b>Tractor Trailer Trucks</b>						<b>193,389</b>	<b>13,586</b>
Motorhomes	Gasoline	55	90,904	Litres	2,835	3,182	212
	Diesel Fuel	< 10	6,868	Litres	3,589	263	18
	Other Fuel	< 10	2,769	Litres	2,189	106	4
<b>Motorhomes</b>						<b>3,551</b>	<b>234</b>
Motorcycles, Mopeds	Gasoline	41	33,978	Litres	5,410	1,189	79
<b>Motorcycles, Mopeds</b>						<b>1,189</b>	<b>79</b>
Bus	Gasoline	< 10	48,862	Litres	24,194	1,710	115
	Diesel Fuel	39	432,406	Litres	22,804	16,561	1,164
	Other Fuel	< 10	2,926	Litres		112	4
<b>Bus</b>						<b>18,383</b>	<b>1,283</b>

# Quesnel City

## Updated 2007 Community Energy and Emissions Inventory

	Gasoline:	545,772	37,279
	Diesel:	266,840	18,793
	Other Fuel:	2,829	112
<b>On Road Transportation Totals</b>	<b>All Fuels:</b>	<b>815,441</b>	<b>56,184</b>

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)	
Residential	Electricity	4,378	38,086,301	Kilowatt Hours	137,111	939	
	Natural Gas	3,326	297,870	GigaJoules	297,870	15,192	
	Heating Oil		14,530	GigaJoules	14,530	1,024	
	Propane		39,534	GigaJoules	39,534	2,412	
	Wood		84,954	GigaJoules	84,954	31	
<b>Residential</b>					<b>573,999</b>	<b>19,598</b>	
Commercial/Small-Medium Industrial	Electricity	1,007	69,540,322	Kilowatt Hours	250,345	1,715	
	Natural Gas	565	274,526	GigaJoules	274,526	14,001	
<b>Commercial/Small-Medium Industrial</b>					<b>524,871</b>	<b>15,716</b>	
					Electricity:	387,456	2,654
					Natural Gas:	572,396	29,193
					Propane:	39,534	2,412
					Wood:	84,954	31
					Heating Oil:	14,530	1,024
<b>Buildings Totals</b>	<b>Buildings:</b>				<b>1,098,870</b>	<b>35,314</b>	

Solid Waste	Mass (t)	CO2e (t)
Community Solid Waste	5,201	3,957

# Quesnel City

## Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION	ENERGY (GJ)	CO2e (t)
Diesel Fuel	6,967,139 L	266,840	18,793
Electricity	107,626,623 kWh	387,456	2,654
Gasoline	15,593,489 L	545,772	37,279
Heating Oil	14,530 GJ	14,530	1,024
Natural Gas	572,396 GJ	572,396	29,193
Other Fuel	73,858 L	2,829	112
Propane	39,534 GJ	39,534	2,412
Solid Waste	5,201 T	0	3,957
Wood	84,954 GJ	84,954	31
<b>Total of Transportation / Buildings / Solid Waste:</b>		<b>1,914,311 GJ</b>	<b>95,455 tonnes</b>

### Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	8	withheld	Kilowatt Hours	-	-
	Natural Gas	13	4,016,600	GigaJoules	4,016,600	204,847
<b>Large Industrial</b>					<b>4,016,600</b>	<b>204,847</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	1,950	37	2,745	68	2,685	69
Semi-Detached House	130	2	110	3	100	3
Row House	220	4	215	5	155	4
Apartment, Duplex	180	3	130	3	125	3
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	795	15	705	17	720	18
Other Single Attached House	10	0	5	0	20	1
Movable Dwelling	30	1	120	3	105	3

#### 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	2,585	75	3,435	81	3,330	81
Car, Truck, Van as Passenger	345	10	275	6	285	7
Public Transit	0	0	55	1	70	2
Walked	470	14	350	8	315	8
Bicycle	30	1	100	2	70	2
Motorcycle	0	0	10	0	0	0
Taxicab	0	0	0	0	10	0
Other Method	15	0	30	1	45	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	9,710.0
Net Land Area (ha) *	1,720.8
Residential Density (people per net ha)	5.6

#### 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	2,980 79
5 to 9.9 km	570 15
10 to 14.9 km	10 0
15 to 24.9 km	15 0
25 km or more	195 5

### 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	71.1	2.6
Agricultural Land Reserve	618.2	22.2
Other land use	2,090.6	75.2
<b>Total Land Area</b>	<b>2,779.9</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.