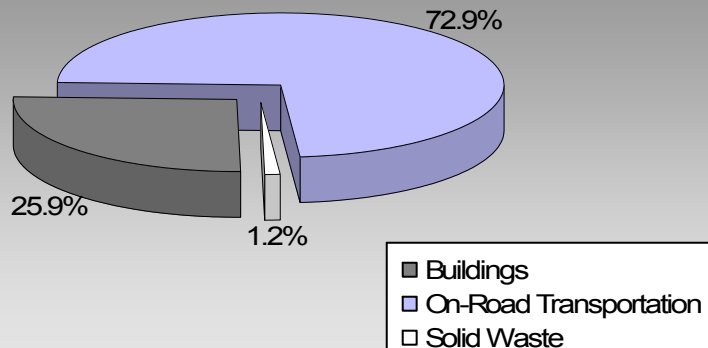


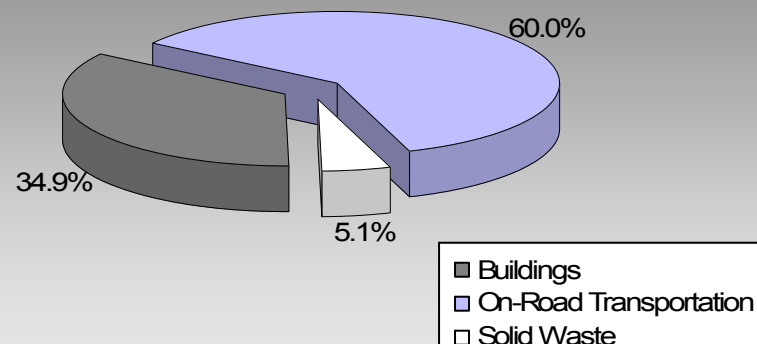
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

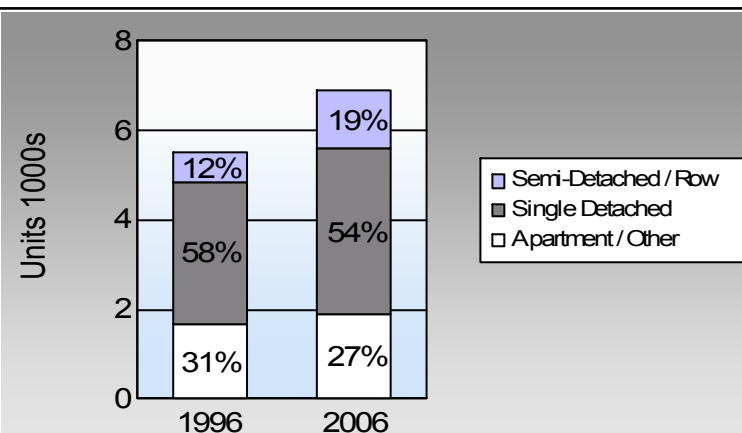
**Fort St. John City
2007 GHG Emissions Sources**



**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

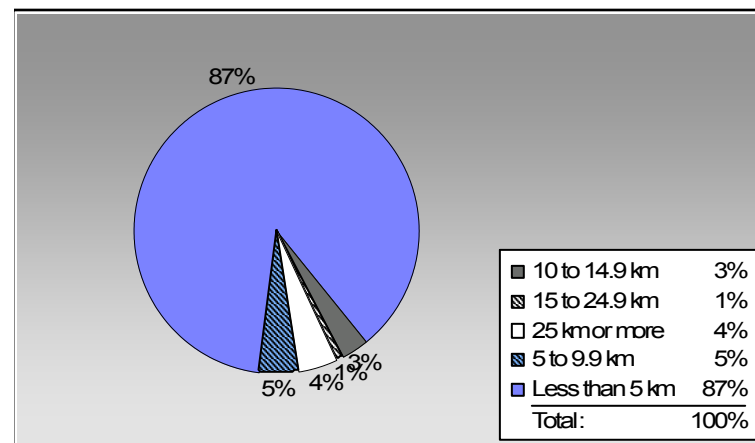
	1996	2006
	78.2%	77.7%
	10.8%	10.0%
	0.9%	0.6%
	8.3%	9.2%
	0.8%	0.9%

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

Residential Density

Fort St. John City: 9.1 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

On Road Transportation		<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	2,352	3,642,527	Litres	14,817	127,488	8,635
	Diesel Fuel	57	65,532	Litres	15,796	2,510	179
Small Passenger Cars						129,998	8,814
Large Passenger Cars	Gasoline	1,515	4,014,307	Litres	20,608	140,501	9,505
	Diesel Fuel	70	215,410	Litres	21,646	8,250	588
	Other Fuel	< 10	17,099	Litres	17,916	655	26
Large Passenger Cars						149,406	10,119
Light Trucks, Vans, SUVs	Gasoline	7,899	27,360,515	Litres	21,479	957,618	65,139
	Diesel Fuel	1,743	5,362,091	Litres	24,091	205,368	14,652
	Other Fuel	52	155,805	Litres	14,803	5,967	239
Light Trucks, Vans, SUVs						1,168,953	80,030
Commercial Vehicles	Gasoline	82	450,286	Litres	18,121	15,760	1,056
	Diesel Fuel	712	4,077,577	Litres	24,457	156,171	10,973
	Other Fuel	< 10	39,421	Litres	12,221	1,510	60
Commercial Vehicles						173,441	12,089
Tractor Trailer Trucks	Gasoline	< 10	38,192	Litres	13,819	1,337	90
	Diesel Fuel	788	28,504,444	Litres	91,133	1,091,720	76,704
	Other Fuel	< 10	2,976	Litres	7,085	114	5
Tractor Trailer Trucks						1,093,171	76,799
Motorhomes	Gasoline	95	140,519	Litres	3,098	4,918	329
	Diesel Fuel	32	53,362	Litres	6,039	2,044	144
	Other Fuel	< 10	4,569	Litres	2,189	175	7
Motorhomes						7,137	480
Motorcycles, Mopeds	Gasoline	118	81,255	Litres	5,526	2,844	190
Motorcycles, Mopeds						2,844	190
Bus	Gasoline	14	118,396	Litres	21,921	4,144	278
	Diesel Fuel	45	594,512	Litres	27,177	22,770	1,600
	Other Fuel	18	112,653	Litres	15,902	4,315	173
Bus						31,229	2,051

Fort St. John City

Updated 2007 Community Energy and Emissions Inventory

	Gasoline:	1,254,610	85,222
	Diesel:	1,488,833	104,840
	Other Fuel:	12,736	510
On Road Transportation Totals	All Fuels:	2,756,179	190,572

Buildings	<u>Type</u>	<u>Connections</u>	<u>Consumption</u>	<u>Measurement</u>	<u>Energy (GJ)</u>	<u>CO2e (t)</u>
Residential	Electricity	7,580	71,236,387	Kilowatt Hours	256,451	1,757
	Natural Gas	5,476	682,329	GigaJoules	682,329	34,799
Residential					938,780	36,556
Commercial/Small-Medium Industrial	Electricity	1,244	96,451,021	Kilowatt Hours	347,223	2,379
	Natural Gas	904	561,600	GigaJoules	561,600	28,642
Commercial/Small-Medium Industrial					908,823	31,021
					Electricity:	4,136
					Natural Gas:	63,441
					Propane:	
					Wood:	
					Heating Oil:	
Buildings Totals	Buildings:				1,847,603	67,577

Solid Waste	<u>Mass (t)</u>	<u>CO2e (t)</u>
Community Solid Waste	3,891	3,098

Fort St. John City

Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION	ENERGY (GJ)	CO2e (t)
Diesel Fuel	38,872,928 L	1,488,833	104,840
Electricity	167,687,408 kWh	603,674	4,136
Gasoline	35,845,997 L	1,254,610	85,222
Natural Gas	1,243,929 GJ	1,243,929	63,441
Other Fuel	332,523 L	12,736	510
Solid Waste	3,891 T	0	3,098
Total of Transportation / Buildings / Solid Waste:		4,603,782 GJ	261,247 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	3,165	37	3,400	55	3,695	54
Semi-Detached House	185	2	345	6	455	7
Row House	465	5	650	11	835	12
Apartment, Duplex	120	1	45	1	70	1
Apartment, 5 storeys or higher	90	1	100	2	90	1
Apartment, under 5 storeys	1,175	14	1,340	22	1,400	20
Other Single Attached House	10	0	15	0	10	0
Movable Dwelling	285	3	270	4	320	5

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	5,735	78	6,155	75	7,610	78
Car, Truck, Van as Passenger	790	11	890	11	980	10
Public Transit	65	1	100	1	55	1
Walked	605	8	860	10	905	9
Bicycle	60	1	90	1	90	1
Motorcycle	0	0	0	0	20	0
Taxicab	10	0	25	0	35	0
Other Method	65	1	85	1	95	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	19,457.0
Net Land Area (ha) *	2,143.2
Residential Density (people per net ha)	9.1

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	6,815 87
5 to 9.9 km	365 5
10 to 14.9 km	250 3
15 to 24.9 km	60 1
25 km or more	335 4

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	33.2	1.5
Agricultural Land Reserve	40.1	1.8
Other land use	2,207.3	96.8
Total Land Area	2,280.5	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 CO ₂ e 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

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.