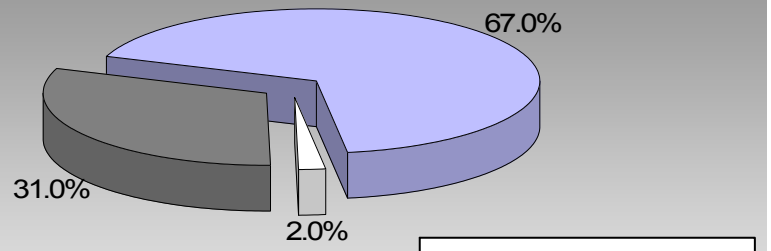
Williams Lake City
Updated 2007 Community Energy and Emissions Inventory

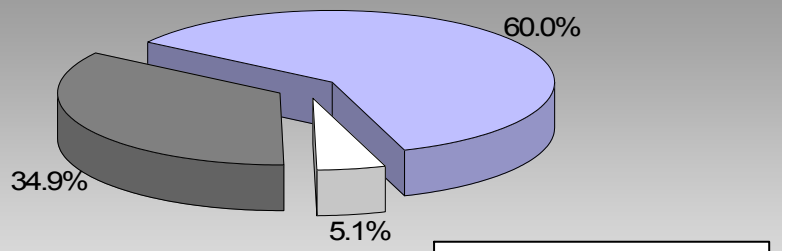
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

Williams Lake City
2007 GHG Emissions Sources

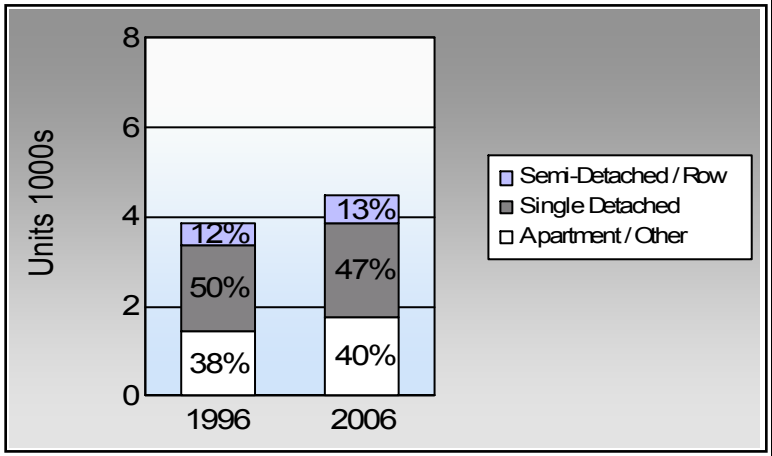


Total for BC Communities



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
	73.7%	74.3%
	10.5%	11.3%
	0.7%	1.3%
	12.1%	9.6%
	1.1%	1.9%

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

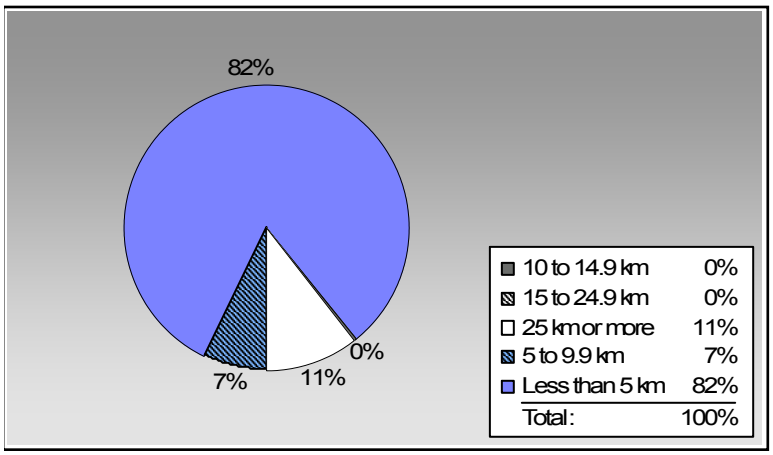
Residential Density

Williams Lake City: 4.7 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.

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	1,907	2,873,065	Litres	14,651	100,557	6,848
	Diesel Fuel	42	46,841	Litres	15,061	1,794	128
	Other Fuel	< 10	660	Litres		25	1
				Small Passenger Cars		**102,376**	**6,977**
Large Passenger Cars	Gasoline	1,136	2,682,376	Litres	18,928	93,883	6,365
	Diesel Fuel	28	72,923	Litres	20,684	2,793	199
	Other Fuel	< 10	8,457	Litres	15,247	324	13
				Large Passenger Cars		**97,000**	**6,577**
Light Trucks, Vans, SUVs	Gasoline	3,555	11,500,613	Litres	20,241	402,521	27,513
	Diesel Fuel	610	1,704,568	Litres	21,430	65,285	4,657
	Other Fuel	30	94,759	Litres	13,810	3,629	145
				Light Trucks, Vans, SUVs		**471,435**	**32,315**
Commercial Vehicles	Gasoline	34	135,351	Litres	13,052	4,737	316
	Diesel Fuel	166	764,767	Litres	20,962	29,291	2,058
	Other Fuel	10	41,050	Litres	13,275	1,572	63
				Commercial Vehicles		**35,600**	**2,437**
Tractor Trailer Trucks	Gasoline	10	49,063	Litres	12,974	1,717	115
	Diesel Fuel	312	10,574,482	Litres	85,379	405,003	28,455
	Other Fuel	< 10	6,546	Litres	7,085	251	10
				Tractor Trailer Trucks		**406,971**	**28,580**
Motorhomes	Gasoline	54	74,117	Litres	2,781	2,594	173
	Diesel Fuel	13	10,779	Litres	3,832	413	29
	Other Fuel	< 10	4,707	Litres	2,189	180	7
				Motorhomes		**3,187**	**209**
Motorcycles, Mopeds	Gasoline	76	40,071	Litres	4,832	1,402	94
				Motorcycles, Mopeds		**1,402**	**94**
Bus	Gasoline	12	126,568	Litres	25,019	4,430	298
	Diesel Fuel	81	736,296	Litres	20,881	28,200	1,981
	Other Fuel	< 10	885	Litres		34	1
				Bus		**32,664**	**2,280**

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	Gasoline:	611,841	41,722
	Diesel:	532,779	37,507
	Other Fuel:	6,015	240
On Road Transportation Totals	**All Fuels:**	**1,150,635**	**79,469**

Buildings

	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Residential	Electricity	4,590	42,287,656	Kilowatt Hours	152,235	1,043
	Natural Gas	3,382	303,187	GigaJoules	303,187	15,463
	Heating Oil		10,435	GigaJoules	10,435	736
	Propane		28,412	GigaJoules	28,412	1,733
	Wood		60,963	GigaJoules	60,963	23
			Residential		**555,232**	**18,998**
Commercial/Small-Medium Industrial	Electricity	1,145	87,260,716	Kilowatt Hours	314,138	2,152
	Natural Gas	763	305,239	GigaJoules	305,239	15,567
			Commercial/Small-Medium Industrial		**619,377**	**17,719**

	Electricity:	466,373	3,195
	Natural Gas:	608,426	31,030
	Propane:	28,412	1,733
	Wood:	60,963	23
	Heating Oil:	10,435	736
Buildings Totals	**Buildings:**	**1,174,609**	**36,717**

Solid Waste

	Mass (t)	CO2e (t)
Community Solid Waste	5,976	2,417

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Grand Total	CONSUMPTION		ENERGY (GJ)	CO2e (t)
Diesel Fuel	13,910,656	L	532,779	37,507
Electricity	129,548,372	kWh	466,373	3,195
Gasoline	17,481,224	L	611,841	41,722
Heating Oil	10,435	GJ	10,435	736
Natural Gas	608,426	GJ	608,426	31,030
Other Fuel	157,064	L	6,015	240
Propane	28,412	GJ	28,412	1,733
Solid Waste	5,976	T	0	2,417
Wood	60,963	GJ	60,963	23
Total of Transportation / Buildings / Solid Waste:			**2,325,244** GJ	**118,603** tonnes

Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	5	withheld	Kilowatt Hours	-	-
	Natural Gas	10	696,091	GigaJoules	696,091	35,501
				Large Industrial	**696,091**	**35,501**

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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	1,925	33	2,135	49	2,100	47
Semi-Detached House	170	3	210	5	235	5
Row House	300	5	355	8	350	8
Apartment, Duplex	220	4	330	8	390	9
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	770	13	785	18	825	19
Other Single Attached House	30	1	15	0	30	1
Movable Dwelling	440	8	500	12	530	12

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	11,090.0
Net Land Area (ha) *	2,366.2
Residential Density (people per net ha)	4.7

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	3,665	74	3,915	79	3,765	74
Car, Truck,Van as Passenge	520	10	280	6	570	11
Public Transit	35	1	25	1	65	1
Walked	600	12	580	12	485	10
Bicycle	55	1	65	1	95	2
Motorcycle	10	0	10	0	20	0
Taxicab	10	0	0	0	0	0
Other Method	80	2	50	1	65	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	3,760	82
5 to 9.9 km	335	7
10 to 14.9 km	10	0
15 to 24.9 km	0	0
25 km or more	490	11

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	47.0	1.5
Agricultural Land Reserve	185.9	5.9
Other land use	2,905.4	92.6
Total Land Area	3,138.3	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