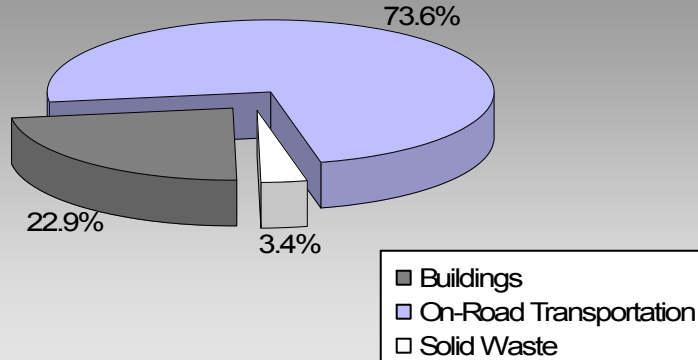**BRITISH COLUMBIA**
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Merritt City
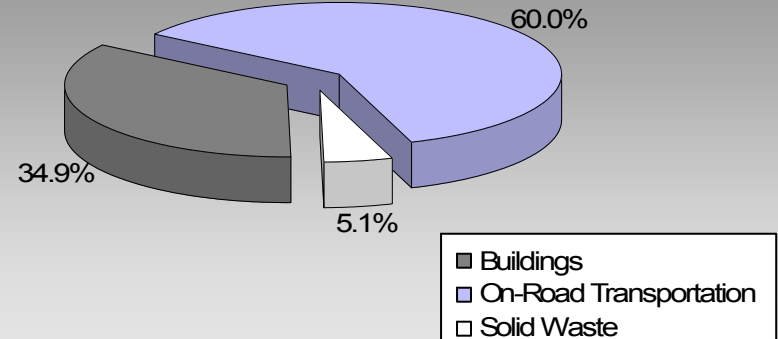# Updated 2007 Community Energy and Emissions Inventory

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?
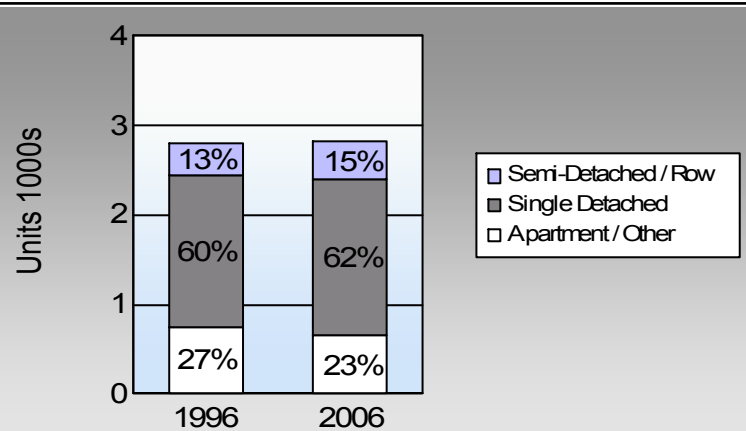
**Merritt City
2007 GHG Emissions Sources**

- 73.6%
- 22.9%
- 3.4%

Legend:
- Buildings
- On-Road Transportation
- Solid Waste

**Total for BC
Communities**

- 60.0%
- 34.9%
- 5.1%

Legend:
- Buildings
- On-Road Transportation
- Solid Waste

Are we living more compactly?
Housing Type

Units 1000s

	1996	2006
Semi-Detached / Row	13%	15%
Single Detached	60%	62%
Apartment / Other	27%	23%

In BC, single family detached housing made up 49% of housing in 2006.

Are we driving less?
Commute To Work

	1996	2006
🚗	74.6%	73.8%
🚗	8.0%	9.5%
🚌	0.3%	0.0%
🚶	13.3%	11.0%
🚲	2.7%	4.5%

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

Residential Density

Merritt 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

This data is currently unavailable in the CEEI 2007 Reports

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.

Merritt City
Updated 2007 Community Energy and Emissions Inventory

Sectors

On Road Transportation		Vehicles	Consumption	Measurement	Average-VKT(km)	Energy (GJ)	CO2e (t)
Small Passenger Cars	Gasoline	1,410	1,948,228	Litres	13,260	68,188	4,661
	Diesel Fuel	47	53,096	Litres	14,168	2,034	145
	Small Passenger Cars					**70,222**	**4,806**
Large Passenger Cars	Gasoline	884	2,115,184	Litres	18,610	74,031	5,035
	Diesel Fuel	27	66,661	Litres	18,342	2,553	182
	Other Fuel	< 10	6,551	Litres	14,939	251	10
	Large Passenger Cars					**76,835**	**5,227**
Light Trucks, Vans, SUVs	Gasoline	2,963	9,235,175	Litres	19,926	323,231	22,128
	Diesel Fuel	475	1,238,188	Litres	20,466	47,423	3,383
	Other Fuel	32	89,084	Litres	13,171	3,412	136
	Light Trucks, Vans, SUVs					**374,066**	**25,647**
Commercial Vehicles	Gasoline	34	144,178	Litres	14,448	5,046	337
	Diesel Fuel	123	598,746	Litres	22,222	22,932	1,611
	Other Fuel	< 10	718	Litres		28	1
	Commercial Vehicles					**28,006**	**1,949**
Tractor Trailer Trucks	Diesel Fuel	305	8,981,739	Litres	78,042	344,001	24,170
	Tractor Trailer Trucks					**344,001**	**24,170**
Motorhomes	Gasoline	65	94,128	Litres	2,891	3,294	220
	Diesel Fuel	< 10	7,736	Litres	3,040	296	21
	Other Fuel	< 10	1,800	Litres	2,189	69	3
	Motorhomes					**3,659**	**244**
Motorcycles, Mopeds	Gasoline	64	32,144	Litres	4,969	1,125	75
	Motorcycles, Mopeds					**1,125**	**75**
Bus	Gasoline	< 10	43,722	Litres	26,193	1,530	103
	Diesel Fuel	< 10	70,168	Litres	17,718	2,687	189
	Other Fuel	< 10	30,723	Litres	15,902	1,177	47
	Bus					**5,394**	**339**

Merritt City
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Gasoline:		476,445	32,559
Diesel:		421,926	29,701
Other Fuel:		4,937	197
On Road Transportation Totals	**All Fuels:**	**903,308**	**62,457**

Buildings

	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Residential	Electricity	3,086	27,328,937	Kilowatt Hours	98,384	674
	Natural Gas	2,468	197,003	GigaJoules	197,003	10,047
	Heating Oil		3,184	GigaJoules	3,184	224
	Propane		5,617	GigaJoules	5,617	343
	Wood		28,028	GigaJoules	28,028	10
			Residential		**332,216**	**11,298**
Commercial/Small-Medium Industrial	Electricity	644	51,262,689	Kilowatt Hours	184,546	1,264
	Natural Gas	348	135,219	GigaJoules	135,219	6,896
			Commercial/Small-Medium Industrial		**319,765**	**8,160**
			Electricity:		282,930	1,938
			Natural Gas:		332,222	16,943
			Propane:		5,617	343
			Wood:		28,028	10
			Heating Oil:		3,184	224
Buildings Totals			**Buildings:**		**651,981**	**19,458**

Solid Waste

	Mass (t)	CO2e (t)
Community Solid Waste	7,941	2,912

Merritt City
Updated 2007 Community Energy and Emissions Inventory

Grand Total

		CONSUMPTION		ENERGY (GJ)	CO2e (t)
Diesel Fuel		11,016,334	L	421,926	29,701
Electricity		78,591,626	kWh	282,930	1,938
Gasoline		13,612,759	L	476,445	32,559
Heating Oil		3,184	GJ	3,184	224
Natural Gas		332,222	GJ	332,222	16,943
Other Fuel		128,876	L	4,937	197
Propane		5,617	GJ	5,617	343
Solid Waste		7,941	T	0	2,912
Wood		28,028	GJ	28,028	10
Total of Transportation / Buildings / Solid Waste:				**1,555,289** GJ	**84,827** tonnes

Memo Items

Buildings

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	2	withheld	Kilowatt Hours	-	-
	Natural Gas	6	withheld	GigaJoules	-	-
				Large Industrial	**-**	**-**

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Merritt City
Updated 2007 Community Energy and Emissions Inventory

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 Units	%	2001 Units	%	2006 Units	%
Single Detached House	1,685	38	1,760	63	1,745	62
Semi-Detached House	150	3	195	7	225	8
Row House	210	5	215	8	200	7
Apartment, Duplex	120	3	20	1	125	4
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	345	8	320	11	300	11
Other Single Attached House	30	1	10	0	25	1
Movable Dwelling	260	6	265	10	195	7

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	7,450.0
Net Land Area (ha) *	1,340.8
Residential Density (people per net ha)	5.6

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 People	%	2001 People	%	2006 People	%
Car, Truck, Van as Driver	2,190	75	2,040	76	2,215	74
Car, Truck, Van as Passenger	235	8	155	6	285	10
Public Transit	10	0	0	0	0	0
Walked	390	13	410	15	330	11
Bicycle	80	3	65	2	135	5
Motorcycle	10	0	0	0	0	0
Taxicab	10	0	0	0	15	1
Other Method	10	0	20	1	20	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	%

This data is currently unavailable in the CEEI 2007 Reports.

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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	16.3	0.7
Agricultural Land Reserve	791.5	32.2
Other land use	1,653.9	67.2
Total Land Area	2,461.7	100.0

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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_2e 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