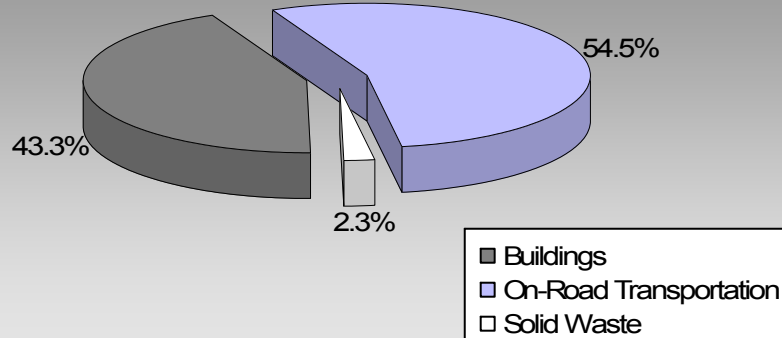


Updated 2007 Community Energy and Emissions Inventory

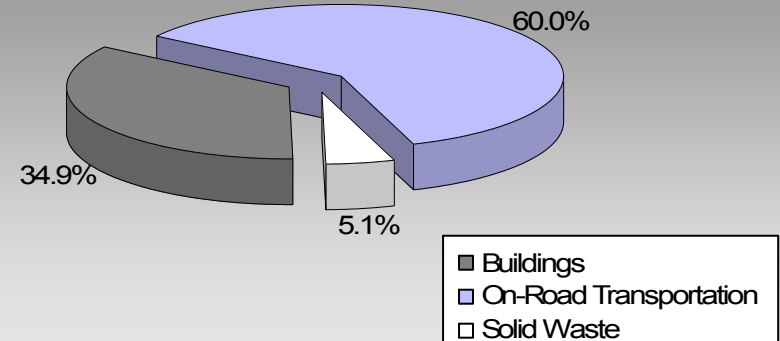
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

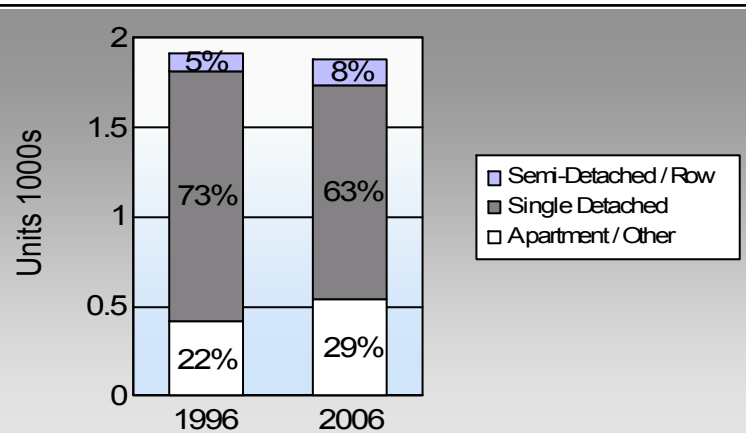
**Fernie City
2007 GHG Emissions Sources**



**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
	63.1%	62.8%
	12.4%	14.4%
	3.9%	0.9%
	12.2%	13.0%
	1.6%	6.9%

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

Residential Density

Fernie City: 3.4 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.

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	762	1,100,408	Litres	13,695	38,514	2,630
	Diesel Fuel	56	59,506	Litres	14,734	2,279	163
Small Passenger Cars						40,793	2,793
Large Passenger Cars	Gasoline	557	1,166,670	Litres	16,272	40,833	2,776
	Diesel Fuel	10	18,758	Litres	15,348	718	51
	Other Fuel	< 10	5,573	Litres	14,593	213	9
Large Passenger Cars						41,764	2,836
Light Trucks, Vans, SUVs	Gasoline	1,898	5,850,523	Litres	19,628	204,768	14,008
	Diesel Fuel	153	375,095	Litres	18,534	14,366	1,025
	Other Fuel	27	62,627	Litres	13,214	2,399	96
Light Trucks, Vans, SUVs						221,533	15,129
Commercial Vehicles	Gasoline	12	57,249	Litres	13,933	2,004	134
	Diesel Fuel	33	164,823	Litres	21,990	6,313	444
	Other Fuel	< 10	2,925	Litres		112	4
Commercial Vehicles						8,429	582
Tractor Trailer Trucks	Gasoline	< 10	1,190	Litres		42	3
	Diesel Fuel	45	1,089,361	Litres	65,121	41,723	2,931
Tractor Trailer Trucks						41,765	2,934
Motorhomes	Gasoline	24	24,036	Litres	2,563	841	56
	Diesel Fuel	< 10	2,957	Litres	6,518	113	8
	Other Fuel	< 10	277	Litres		11	-
Motorhomes						965	64
Motorcycles, Mopeds	Gasoline	37	24,415	Litres	5,428	855	57
Motorcycles, Mopeds						855	57
Bus	Gasoline	< 10	33,184	Litres	15,521	1,161	78
	Diesel Fuel	< 10	51,059	Litres	21,951	1,956	137
	Other Fuel	< 10	7,315	Litres		280	11
Bus						3,397	226

Fernie City

Updated 2007 Community Energy and Emissions Inventory

	Gasoline:	289,018	19,742
	Diesel:	67,468	4,759
	Other Fuel:	3,015	120
On Road Transportation Totals	All Fuels:	359,501	24,621

Buildings	<u>Type</u>	<u>Connections</u>	<u>Consumption</u>	<u>Measurement</u>	<u>Energy (GJ)</u>	<u>CO2e (t)</u>	
Residential	Electricity	2,651	20,932,793	Kilowatt Hours	75,358	516	
	Natural Gas	2,028	189,320	GigaJoules	189,320	9,655	
	Heating Oil		9,146	GigaJoules	9,146	645	
	Propane		16,076	GigaJoules	16,076	981	
	Wood		19,202	GigaJoules	19,202	7	
Residential					309,102	11,804	
Commercial/Small-Medium Industrial	Electricity	438	23,703,200	Kilowatt Hours	85,331	585	
	Natural Gas	282	140,458	GigaJoules	140,458	7,163	
Commercial/Small-Medium Industrial					225,789	7,748	
					Electricity:	160,689	1,101
					Natural Gas:	329,778	16,818
					Propane:	16,076	981
					Wood:	19,202	7
					Heating Oil:	9,146	645
Buildings Totals	Buildings:				534,891	19,552	

Solid Waste	<u>Mass (t)</u>	<u>CO2e (t)</u>
Community Solid Waste	4,959	1,023

Fernie City

Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION		ENERGY (GJ)	CO2e (t)
Diesel Fuel	1,761,559	L	67,468	4,759
Electricity	44,635,993	kWh	160,689	1,101
Gasoline	8,257,675	L	289,018	19,742
Heating Oil	9,146	GJ	9,146	645
Natural Gas	329,778	GJ	329,778	16,818
Other Fuel	78,717	L	3,015	120
Propane	16,076	GJ	16,076	981
Solid Waste	4,959	T	0	1,023
Wood	19,202	GJ	19,202	7
Total of Transportation / Buildings / Solid Waste:			894,392 GJ	45,196 tonnes

Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	0	0	Kilowatt Hours	-	-
	Natural Gas	2	withheld	GigaJoules	-	-
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	1,400	42	1,365	70	1,190	63
Semi-Detached House	50	2	40	2	35	2
Row House	50	2	120	6	110	6
Apartment, Duplex	10	0	15	1	5	0
Apartment, 5 storeys or higher	0	0	35	2	15	1
Apartment, under 5 storeys	300	9	260	13	335	18
Other Single Attached House	10	0	20	1	5	0
Movable Dwelling	95	3	95	5	185	10

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	1,395	63	1,455	66	1,375	63
Car, Truck, Van as Passenger	275	12	290	13	315	14
Public Transit	85	4	40	2	20	1
Walked	270	12	305	14	285	13
Bicycle	35	2	30	1	150	7
Motorcycle	0	0	0	0	0	0
Taxicab	10	0	0	0	0	0
Other Method	140	6	70	3	45	2

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	4,415.0
Net Land Area (ha) *	1,294.6
Residential Density (people per net ha)	3.4

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.

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	49.5	3.4
Agricultural Land Reserve	51.9	3.5
Other land use	1,373.3	93.1
Total Land Area	1,474.6	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.