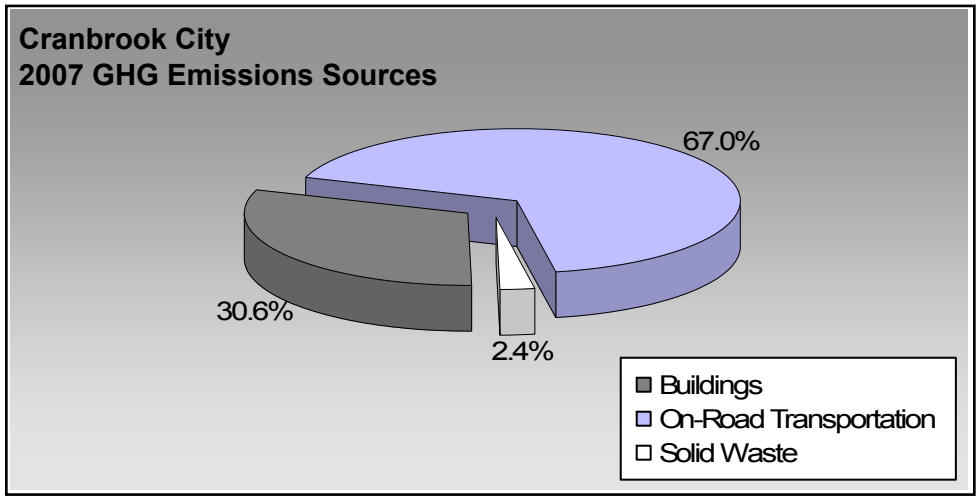
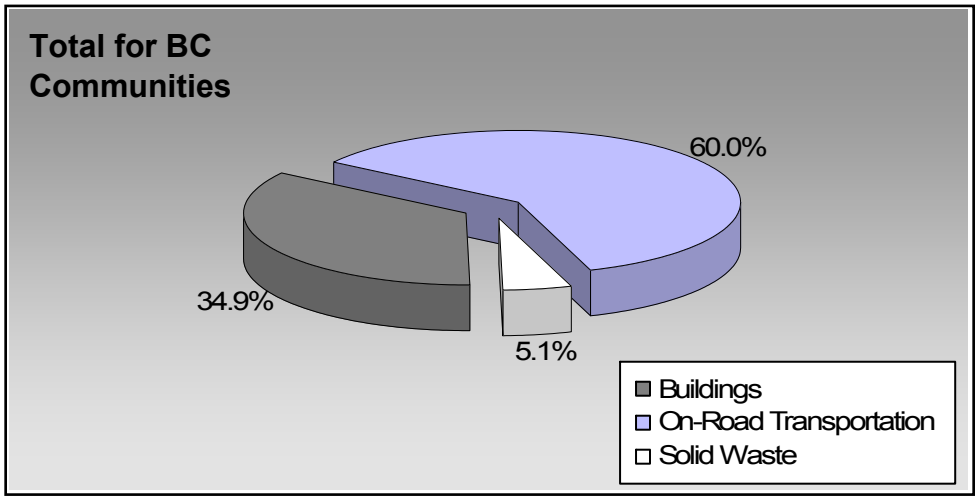
Cranbrook City
Updated 2007 Community Energy and Emissions Inventory

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

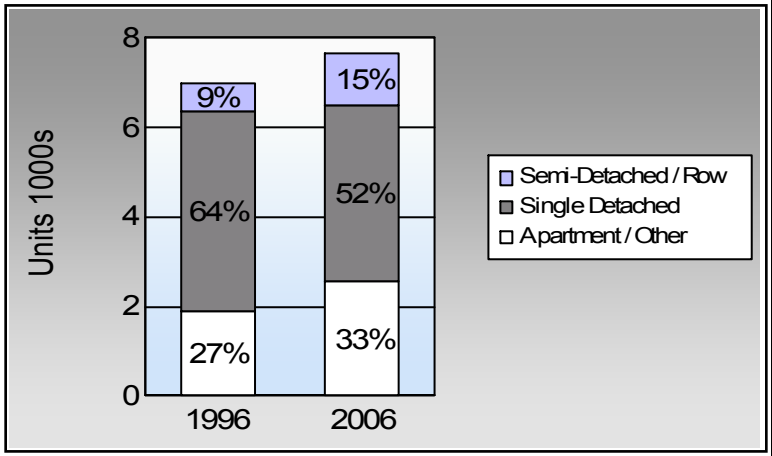
Where are the majority of our community's emissions coming from?





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
	73.1%	73.9%
	10.8%	11.5%
	0.4%	1.5%
	13.4%	9.8%
	1.5%	2.0%

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

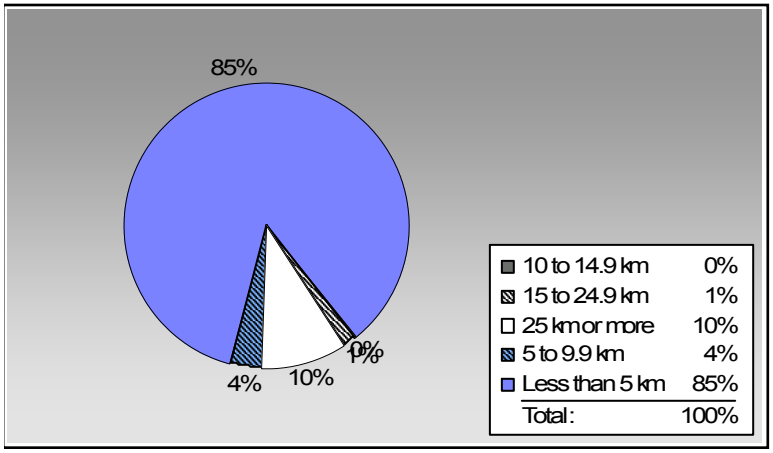
Residential Density

Cranbrook City: 7.3 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.

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Sectors

On Road Transportation		Vehicles	Consumption	Measurement	Average-VKT(km)	Energy (GJ)	CO2e (t)
Small Passenger Cars	Gasoline	3,067	4,400,045	Litres	13,924	154,002	10,490
	Diesel Fuel	125	133,284	Litres	14,948	5,105	364
				Small Passenger Cars		**159,107**	**10,854**
Large Passenger Cars	Gasoline	2,337	4,801,832	Litres	16,626	168,064	11,401
	Diesel Fuel	42	106,004	Litres	18,401	4,060	289
	Other Fuel	< 10	6,530	Litres	14,722	250	10
				Large Passenger Cars		**172,374**	**11,700**
Light Trucks, Vans, SUVs	Gasoline	6,604	20,804,030	Litres	20,157	728,141	49,765
	Diesel Fuel	540	1,381,279	Litres	20,134	52,903	3,774
	Other Fuel	61	155,793	Litres	13,501	5,967	239
				Light Trucks, Vans, SUVs		**787,011**	**53,778**
Commercial Vehicles	Gasoline	60	276,899	Litres	14,991	9,691	648
	Diesel Fuel	185	891,001	Litres	21,699	34,125	2,398
	Other Fuel	10	32,249	Litres	11,575	1,235	49
				Commercial Vehicles		**45,051**	**3,095**
Tractor Trailer Trucks	Gasoline	< 10	21,985	Litres	16,358	769	52
	Diesel Fuel	439	15,319,037	Litres	88,024	586,719	41,223
				Tractor Trailer Trucks		**587,488**	**41,275**
Motorhomes	Gasoline	110	133,045	Litres	2,844	4,657	311
	Diesel Fuel	11	16,271	Litres	5,890	623	44
	Other Fuel	< 10	2,077	Litres	2,189	80	3
				Motorhomes		**5,360**	**358**
Motorcycles, Mopeds	Gasoline	143	80,947	Litres	5,265	2,833	189
				Motorcycles, Mopeds		**2,833**	**189**
Bus	Gasoline	13	136,579	Litres	25,623	4,780	321
	Diesel Fuel	43	460,227	Litres	22,703	17,627	1,238
	Other Fuel	< 10	3,036	Litres		116	5
				Bus		**22,523**	**1,564**

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	Gasoline:	1,072,937	73,177
	Diesel:	701,162	49,330
	Other Fuel:	7,648	306
On Road Transportation Totals	**All Fuels:**	**1,781,747**	**122,813**

Buildings

	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Residential	Electricity	8,163	67,651,118	Kilowatt Hours	243,544	1,669
	Natural Gas	6,436	573,667	GigaJoules	573,667	29,257
	Heating Oil		9,254	GigaJoules	9,254	652
	Propane		16,276	GigaJoules	16,276	993
			Residential		**842,741**	**32,571**
Commercial/Small-Medium Industrial	Electricity	1,315	105,066,616	Kilowatt Hours	378,240	2,592
	Natural Gas	849	410,074	GigaJoules	410,074	20,914
			Commercial/Small-Medium Industrial		**788,314**	**23,506**

	Electricity:	621,784	4,261
	Natural Gas:	983,741	50,171
	Propane:	16,276	993
	Wood:		
	Heating Oil:	9,254	652
Buildings Totals	**Buildings:**	**1,631,055**	**56,077**

Solid Waste

	Mass (t)	CO2e (t)
Community Solid Waste	21,617	4,458

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Grand Total

	CONSUMPTION		ENERGY (GJ)	CO2e (t)
Diesel Fuel	18,307,103	L	701,162	49,330
Electricity	172,717,734	kWh	621,784	4,261
Gasoline	30,655,362	L	1,072,937	73,177
Heating Oil	9,254	GJ	9,254	652
Natural Gas	983,741	GJ	983,741	50,171
Other Fuel	199,685	L	7,648	306
Propane	16,276	GJ	16,276	993
Solid Waste	21,617	T	0	4,458
Total of Transportation / Buildings / Solid Waste:			**3,412,802** GJ	**183,348** tonnes

Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	0	0	Kilowatt Hours	-	-
	Natural Gas	6	116,763	GigaJoules	116,763	5,955
				Large Industrial	**116,763**	**5,955**

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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	4,465	39	4,845	64	3,960	52
Semi-Detached House	275	2	340	5	555	7
Row House	345	3	490	7	595	8
Apartment, Duplex	190	2	105	1	50	1
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	1,300	11	1,350	18	1,370	18
Other Single Attached House	15	0	15	0	10	0
Movable Dwelling	385	3	380	5	1,110	15

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	19,161.0
Net Land Area (ha) *	2,621.0
Residential Density (people per net ha)	7.3

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	5,745	73	5,830	76	6,245	74
Car, Truck,Van as Passenge	850	11	745	10	975	12
Public Transit	30	0	40	1	130	2
Walked	1,055	13	805	11	825	10
Bicycle	120	2	145	2	170	2
Motorcycle	10	0	15	0	35	0
Taxicab	0	0	0	0	0	0
Other Method	55	1	85	1	70	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	6,165	85
5 to 9.9 km	265	4
10 to 14.9 km	20	0
15 to 24.9 km	100	1
25 km or more	705	10

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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	142.9	4.5
Agricultural Land Reserve	449.6	14.0
Other land use	2,613.9	81.5
Total Land Area	3,206.4	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