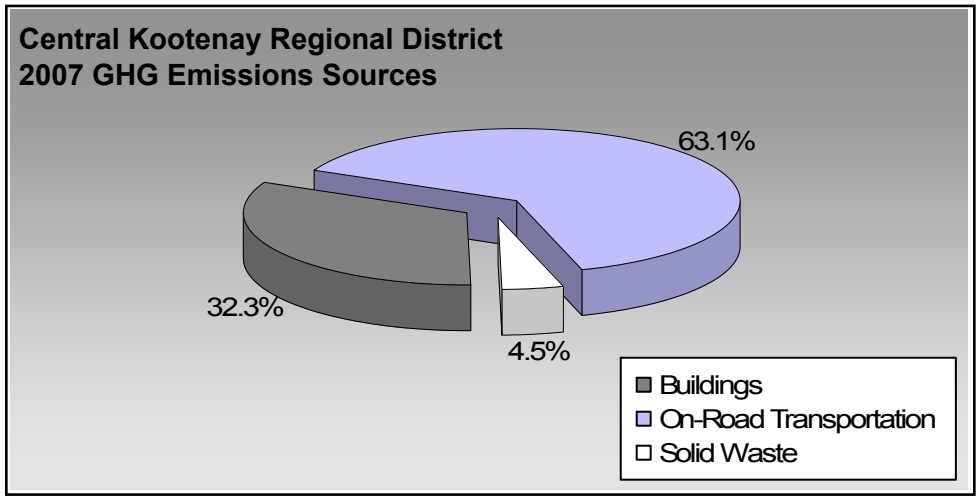
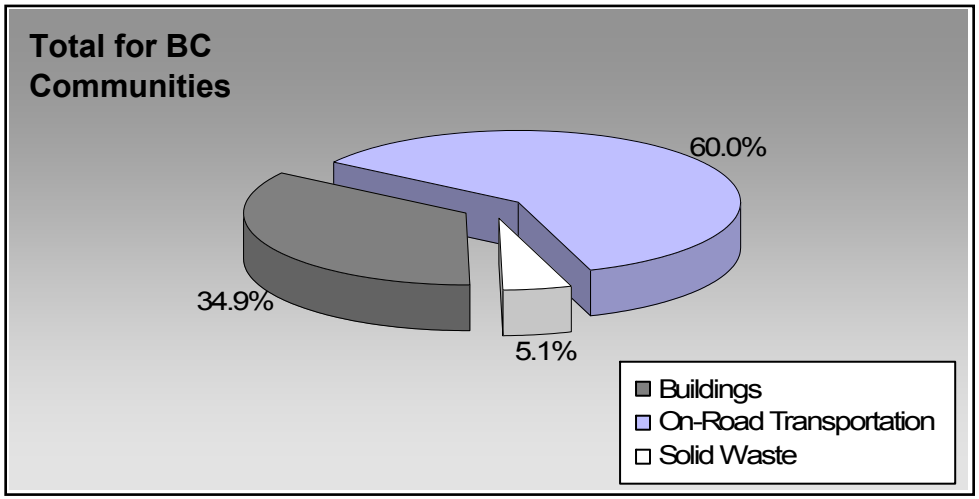
Central Kootenay Regional District
Updated 2007 Community Energy and Emissions Inventory

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

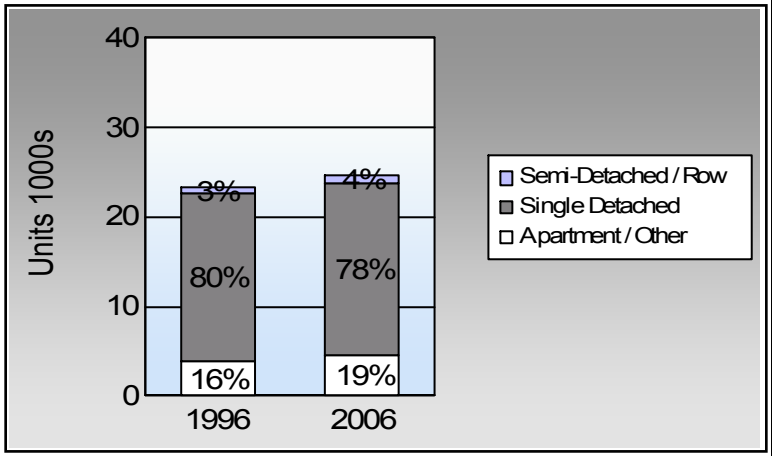
Where are the majority of our community's emissions coming from?





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
	77.1%	76.4%
	7.7%	7.6%
	0.7%	1.4%
	11.9%	11.4%
	1.0%	1.9%

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

Residential Density

This data is only available for municipalities.

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.

Sectors

On Road Transportation		Vehicles	Consumption	Measurement	Average-VKT(km)	Energy (GJ)	CO2e (t)
Small Passenger Cars	Gasoline	9,912	13,771,310	Litres	13,539	481,996	32,977
	Diesel Fuel	427	426,737	Litres	13,636	16,344	1,165
	Other Fuel	< 10	875	Litres	8,199	34	1
				Small Passenger Cars		**498,374**	**34,143**
Large Passenger Cars	Gasoline	5,737	11,793,498	Litres	16,259	412,772	28,104
	Diesel Fuel	124	274,066	Litres	16,066	10,497	747
	Other Fuel	19	47,792	Litres	13,247	1,830	73
				Large Passenger Cars		**425,099**	**28,924**
Light Trucks, Vans, SUVs	Gasoline	18,315	54,939,572	Litres	19,316	1,922,885	131,897
	Diesel Fuel	1,996	4,842,550	Litres	18,570	185,470	13,229
	Other Fuel	184	486,148	Litres	13,250	18,619	745
				Light Trucks, Vans, SUVs		**2,126,974**	**145,871**
Commercial Vehicles	Gasoline	153	677,649	Litres	13,483	23,718	1,582
	Diesel Fuel	444	2,072,713	Litres	20,997	79,385	5,578
	Other Fuel	20	91,928	Litres	11,904	3,521	141
				Commercial Vehicles		**106,624**	**7,301**
Tractor Trailer Trucks	Gasoline	10	30,351	Litres	7,085	1,062	71
	Diesel Fuel	549	15,609,108	Litres	70,975	597,829	42,003
	Other Fuel	< 10	13,775	Litres	8,292	528	21
				Tractor Trailer Trucks		**599,419**	**42,095**
Motorhomes	Gasoline	325	418,362	Litres	2,765	14,643	977
	Diesel Fuel	41	38,493	Litres	3,828	1,474	104
	Other Fuel	< 10	6,645	Litres	2,189	255	10
				Motorhomes		**16,372**	**1,091**
Motorcycles, Mopeds	Gasoline	637	317,804	Litres	4,851	11,123	742
				Motorcycles, Mopeds		**11,123**	**742**
Bus	Gasoline	19	153,981	Litres	17,048	5,389	362
	Diesel Fuel	85	949,413	Litres	22,516	36,363	2,555
	Other Fuel	< 10	21,945	Litres	15,902	841	34
				Bus		**42,593**	**2,951**

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	Gasoline:	2,873,588	196,712
	Diesel:	927,362	65,381
	Other Fuel:	25,628	1,025
On Road Transportation Totals	**All Fuels:**	**3,826,578**	**263,118**

Buildings

	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Residential	Electricity	31,797	368,502,807	Kilowatt Hours	1,326,609	2,733
	Natural Gas	11,471	828,485	GigaJoules	828,485	42,252
	Heating Oil		358,369	GigaJoules	358,369	25,261
	Propane		630,696	GigaJoules	630,696	38,479
	Wood		751,295	GigaJoules	751,295	278
			Residential		**3,895,454**	**109,003**
Commercial/Small-Medium Industrial	Electricity	4,541	173,810,512	Kilowatt Hours	625,717	1,284
	Natural Gas	1,301	478,747	GigaJoules	478,747	24,416
			Commercial/Small-Medium Industrial		**1,104,464**	**25,700**

	Electricity:	1,952,326	4,017
	Natural Gas:	1,307,232	66,668
	Propane:	630,696	38,479
	Wood:	751,295	278
	Heating Oil:	358,369	25,261
Buildings Totals	**Buildings:**	**4,999,918**	**134,703**

Solid Waste

		Mass (t)	CO2e (t)
	Community Solid Waste	29,354	18,925

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Grand Total

	CONSUMPTION		ENERGY (GJ)	CO2e (t)
Diesel Fuel	24,213,080	L	927,362	65,381
Electricity	542,313,319	kWh	1,952,326	4,017
Gasoline	82,102,527	L	2,873,588	196,712
Heating Oil	358,369	GJ	358,369	25,261
Natural Gas	1,307,232	GJ	1,307,232	66,668
Other Fuel	669,108	L	25,628	1,025
Propane	630,696	GJ	630,696	38,479
Solid Waste	29,354	T	0	18,925
Wood	751,295	GJ	751,295	278
Total of Transportation / Buildings / Solid Waste:			**8,826,496** GJ	**416,746** tonnes

Memo Items

Buildings

	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	12	88,906,077	Kilowatt Hours	320,062	533
	Natural Gas	12	withheld	GigaJoules	-	-
				Large Industrial	**320,062**	**533**

Agriculture

		Number of Animals	Methane	CO2e (t)
	Enteric Fermentation	13,115	804	16,884

Land-Use Change

	Area (ha)	CO2e (t)
Deforestation from Agriculture	-	-
Deforestation from Settlement	143	68,864
Deforestation:	**143**	**68,864**

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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	18,750	45	19,175	79	19,155	78
Semi-Detached House	265	1	385	2	380	2
Row House	500	1	585	2	510	2
Apartment, Duplex	750	2	795	3	765	3
Apartment, 5 storeys or higher	105	0	30	0	15	0
Apartment, under 5 storeys	1,440	3	1,415	6	1,665	7
Other Single Attached House	70	0	90	0	110	0
Movable Dwelling	1,445	3	1,735	7	2,075	8

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
This data is currently unavailable in the CEEI 2007 Reports.

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	17,195	77	16,965	77	17,180	76
Car, Truck,Van as Passenge	1,725	8	1,525	7	1,715	8
Public Transit	145	1	260	1	315	1
Walked	2,645	12	2,745	12	2,575	11
Bicycle	230	1	345	2	425	2
Motorcycle	45	0	40	0	40	0
Taxicab	10	0	50	0	15	0
Other Method	295	1	215	1	235	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.	

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	360,176.5	16.1
Local Parks	6,620.6	0.3
Agricultural Land Reserve	63,560.2	2.8
Other land use	1,808,762.6	80.8
Total Land Area	2,239,119.9	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