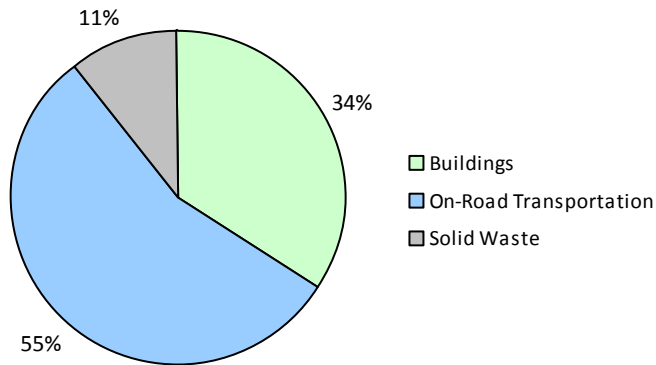
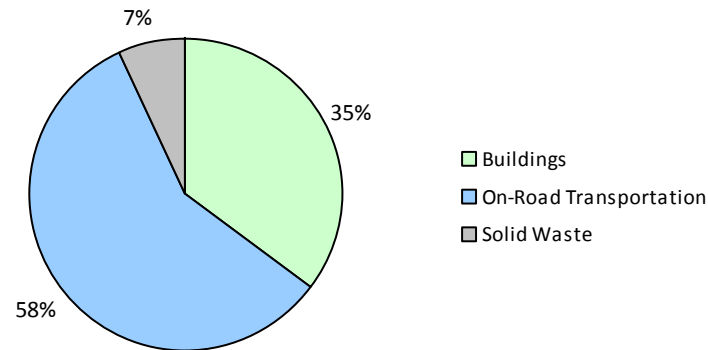


Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

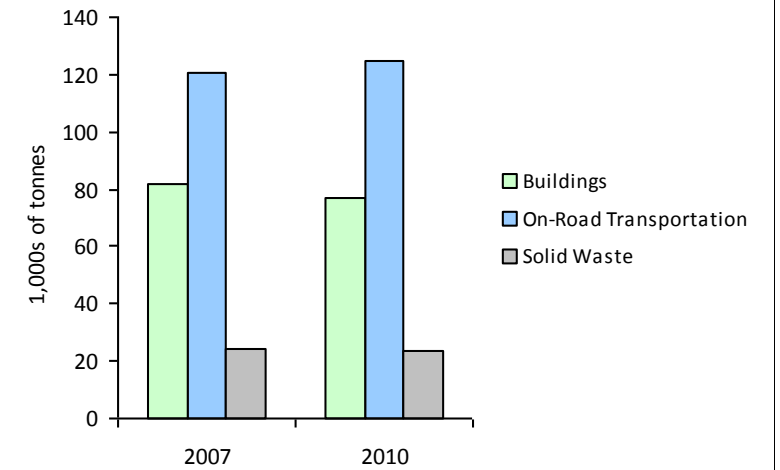
2010 GHG Emissions Sources (Total for this Community)



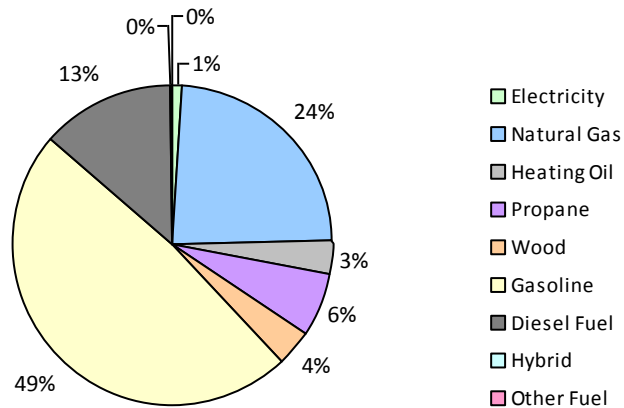
2010 GHG Emissions Sources (Total for BC)



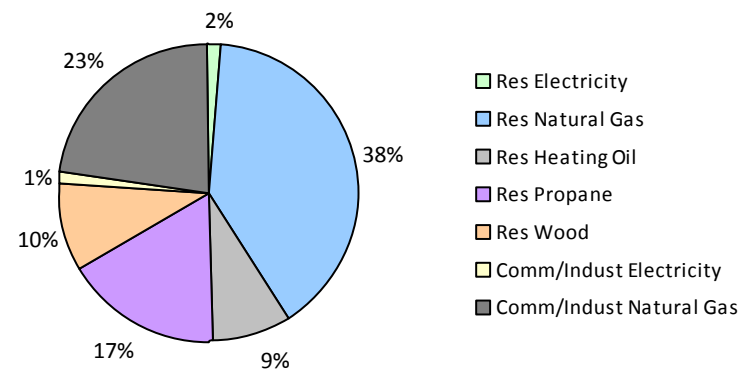
GHG Emissions Comparisons for this Community



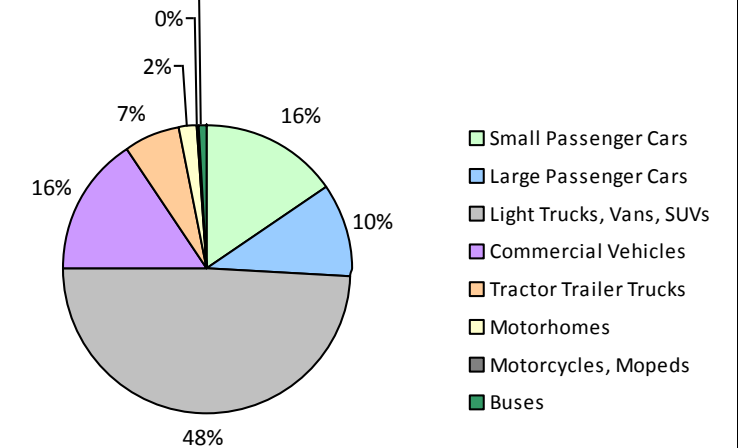
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



Kootenay Boundary Regional District 2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

Core Items

On-Road Transportation		2007					2010				
		Connections	Consumption	Avg VKT (km)	Energy (GJ)	CO2e (t)	Connections	Consumption	Avg VKT (km)	Energy (GJ)	CO2e (t)
Small Passenger Cars	Hybrid			24,100	77	5			20,600	285	18
	Gasoline	5,645	8,285,646 L	15,500	289,998	19,705	5,574	8,301,542 L	15,800	290,554	18,647
	Diesel Fuel	169	282,462 L	24,200	10,818	771	184	295,058 L	23,300	11,300	782
	Other Fuel			22,500	61	3			20,700	58	4
Large Passenger Cars	Hybrid	11	12,880 L	23,300	451	30	40	50,430 L	21,600	1,765	113
	Gasoline	3,643	5,986,456 L	14,600	209,525	14,216	3,442	5,576,750 L	14,400	195,186	12,524
	Diesel Fuel	27	31,701 L	11,600	1,214	85	33	38,005 L	11,900	1,456	100
	Other Fuel			11,800	154	9			10,800	68	4
Light Trucks, Vans, SUVs	Hybrid			21,800	412	29	15	29,825 L	23,500	1,043	67
	Gasoline	9,324	23,197,235 L	17,000	811,903	55,543	10,132	25,786,409 L	17,500	902,524	58,513
	Diesel Fuel	575	1,146,088 L	11,200	43,896	3,119	436	998,813 L	13,400	38,254	2,641
	Other Fuel	65	125,008 L	11,500	3,163	191	33	57,997 L	11,200	1,467	88
Commercial Vehicles	Gasoline	771	2,245,896 L	17,200	78,607	5,278	924	2,703,047 L	17,400	94,608	6,048
	Diesel Fuel	1,079	3,646,618 L	18,600	139,665	9,812	1,396	5,069,880 L	20,400	194,176	13,237
	Other Fuel	47	110,486 L	12,100	2,795	170	31	71,579 L	12,000	1,810	109
Tractor Trailer Trucks	Gasoline			19,000	392	26			14,300	772	50
	Diesel Fuel	210	3,093,216 L	34,300	118,470	8,323	223	3,133,135 L	33,500	119,999	8,181
	Other Fuel			10,800	442	26			11,700	144	9
Motorhomes	Gasoline	152	427,170 L	19,300	14,952	999	182	510,593 L	19,200	17,871	1,136
	Diesel Fuel	124	387,964 L	16,700	14,859	1,043	131	423,924 L	16,400	16,236	1,106
	Other Fuel			18,200	374	22			20,400	304	19
Motorcycles, Mopeds	Gasoline	429	93,524 L	4,700	3,274	219	500	132,803 L	5,700	4,648	295
Buses	Gasoline	31	101,791 L	18,800	3,563	239	29	85,190 L	17,400	2,982	191
	Diesel Fuel	59	330,208 L	21,900	12,647	889	64	348,095 L	22,700	13,332	909
	Other Fuel			8,600	46	3					
Totals		22,361	49,504,349 L	16,146	1,761,758	120,755	23,369	49,504,349 L	16,685	1,910,842	124,791

Kootenay Boundary Regional District 2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Residential	Wood	N/A	388,561 GJ	388,561	7,872	N/A	374,004 GJ	374,004	7,577
	Heating Oil	N/A	99,969 GJ	99,969	7,047	N/A	96,224 GJ	96,224	6,581
	Propane	N/A	213,401 GJ	213,401	13,019	N/A	209,284 GJ	209,284	12,768
	Natural Gas	9,314	657,017 GJ	657,017	32,954	9,282	602,605 GJ	602,605	30,227
	Electricity	20,992	220,997,531 kWh	795,590	1,270	19,115	219,982,766 kWh	791,937	1,320
Commercial/Small-Medium Industrial	Natural Gas	993	369,377 GJ	369,377	18,528	971	354,233 GJ	354,233	17,766
	Electricity	3,147	136,843,940 kWh	492,638	754	2,961	132,809,568 kWh	478,114	797
Totals		34,446		3,016,553	81,444	32,329		2,906,401	77,036

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Community Solid Waste	Solid Waste	0	14,517 t	N/A	24,222	0	14,629 t	N/A	23,734
Totals		0			24,222	0			23,734

Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Large Industrial	Natural Gas	9		0	0	8		0	0
	Electricity	4	100,345,120 kWh	361,242	602	2		0	0
Totals		13		361,242	602	10		0	0

Agriculture		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Enteric Fermentation	Methane	15,903	931 t	0	19,551				
Totals		15,903			19,551	0			

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

Land-use Change - Deforestation	2007				2010			
	Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Agriculture Deforestation	5	0 ha	0	2,374				
Settlement Deforestation	1	0 ha	0	820				
Totals	6			3,194	0			

Totals for Transportation, Buildings and Solid Waste

Fuel Type	2007 (Population: 31,389)			2010 (Population: 31,885)		
	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	12,880 L	940	64	80,255 L	3,093	198
Gasoline	40,337,718 L	1,412,214	96,225	43,096,334 L	1,509,145	97,404
Diesel Fuel	8,918,257 L	341,569	24,042	10,306,910 L	394,753	26,956
Other Fuel	235,494 L	7,035	424	129,576 L	3,851	233
Wood	388,561 GJ	388,561	7,872	374,004 GJ	374,004	7,577
Heating Oil	99,969 GJ	99,969	7,047	96,224 GJ	96,224	6,581
Propane	213,401 GJ	213,401	13,019	209,284 GJ	209,284	12,768
Natural Gas	1,026,394 GJ	1,026,394	51,482	956,838 GJ	956,838	47,993
Electricity	357,841,471 kWh	1,288,228	2,024	352,792,334 kWh	1,270,051	2,117
Solid Waste	14,517 t	0	24,222	14,629 t	0	23,734
Grand Totals		4,778,311	226,421		4,817,243	225,561

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

Supporting Indicators

No new supporting indicator data have been provided in the 2010 reports. Work is currently underway to produce a complete second round of data for the indicators below in the 2012 reports (available in 2014). In the interim, we are including the same supporting indicator data that was provided in the 2007 reports. Feedback is requested on all supporting indicators; please contact us directly at

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	11,135	45	11,305	83	11,145	82
Semi-Detached House	160	1	195	1	235	2
Row House	230	1	345	3	325	2
Apartment, Duplex	245	1	240	2	220	2
Apartment, 5 storeys or higher	10	0	5	0	0	0
Apartment, under 5 storeys	1,030	4	985	7	1,010	7
Other Single Attached House	70	0	40	0	60	0
Movable Dwelling	555	2	530	4	630	5

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	
	Units	%	Units	%	Units	%
Car, Truck, Van as Driver	9,740	76	10,040	79	10,320	80
Car, Truck, Van as Passenger	1,065	8	845	7	1,035	8
Public Transit	155	1	130	1	180	1
Walked	1,410	11	1,300	10	1,025	8
Bicycle	270	2	210	2	270	2
Motorcycle	25	0	20	0	15	0
Taxicab	10	0	0	0	15	0
Other Method	110	1	120	1	75	1

Parks and Protected Greenspace

Parks and protected greenspaces are important for the protection and enhancement of community carbon sinks.

	2009	
	Units	%
National Parks	0	0
Provincial Parks / Protected Areas	70,490	10
Local Parks	123	0
Agricultural Land Reserve	54,133	8
Other land use	589,538	83
Total Parks and Protected Area	70,612	10
Total Land Area	714,284	100

* Total is net of Indian Reserves
** Quantity of parkland may be underestimated

Residential Density

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	
	Units	%
National Parks	0	0
Provincial Parks / Protected Areas	70,490	10
Local Parks	123	0
Agricultural Land Reserve	54,133	8
Other land use	589,538	83
Total Parks and Protected Area	70,612	10
Total Land Area	714,284	100

* Net of Crown land, parks, Indian Reserves, water features, airports, ALR, waste disposal site

Kootenay Boundary Regional District
2010 Community Energy and Emissions Inventory
Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

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Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

Supporting Indicators Under Consideration

Work is currently underway to produce a complete second round of supporting indicators for the 2012 reports (available in 2014). These reports will new data for the five supporting indicators included in the 2007 and 2010 Reports:

- **Housing Type:** Private dwellings by structural type
- **Commute to Work:** Employed labour force - by mode of commute
- **Commute Distance**
- **Residential Density**
- **Parks and Protected Greenspace**

And in addition, the 2012 reports we are working to be able to include:

- **Proximity to Transit**
- **Building Energy Intensity**
- **Building Floor Space**
- **Waste Diversion**

We are continuing to work towards reporting on even more supporting indicators in the future including:

- **Proximity to Services** (e.g. destinations such as grocery store, school, other retail etc.)
- **Transit Ridership**
- **Water Use**
- **Impervious Surface Cover:** % change in impervious surface cover
- **Tree Canopy Cover:** % change in tree canopy cover
- **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)

Please give us feedback by contacting us directly at CEEIRPT@gov.bc.ca

Many local governments have been undertaking a significant amount of climate action in both the corporate and community-wide spheres, as demonstrated in both the public reports from the Climate Action Revenue Incentive Program (CARIP) <http://www.cscd.gov.bc.ca/lgd/greencommunities/carip.htm>, and on the <http://toolkit.bc.ca> website. These two resources may be helpful to those who are interested in learning from other BC local governments. The toolkit also contains additional information and resources including decision-support/planning frameworks and tools for undertaking actions to reduce GHG emissions and energy consumption.

This is your local government's 2010 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 as well as supporting indicators 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, fulfill Milestone One requirements for those local government members of the Federation of Canadian Municipalities' (FCM's) Partners in Climate Protection (PCP) program, as well as supporting local government efforts to monitor progress towards Regional Growth Strategy objectives.

A first in North America!

CEEI is a first in North America and a first step for BC communities. The 2010 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 from large industrial buildings, including updated land-use change and new agricultural sectors as 'memo items'. 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.

For More Information

The full list of all BC local government 2010 CEEI Reports, User Guide, Technical Methods and Guidance Document, and additional information on the Supporting 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, please take the time to 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,