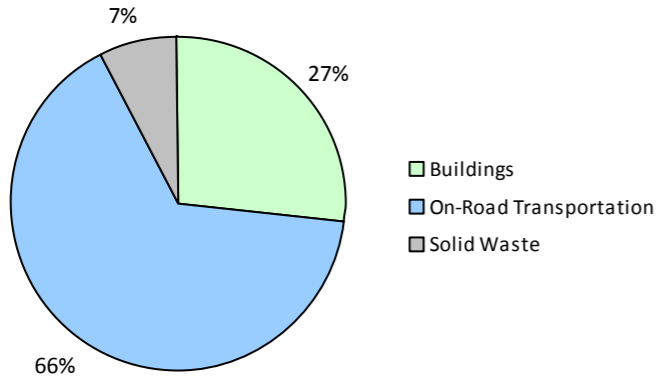
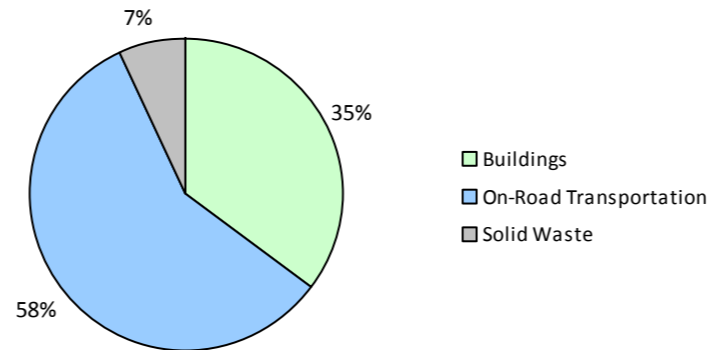


## Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

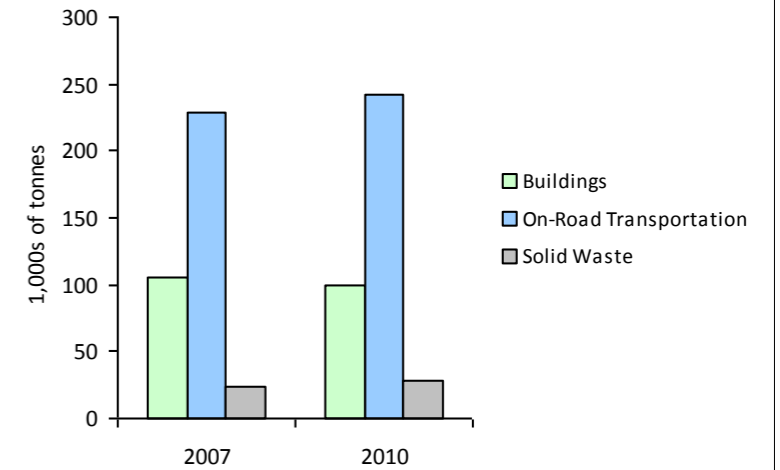
2010 GHG Emissions Sources (Total for this Community)



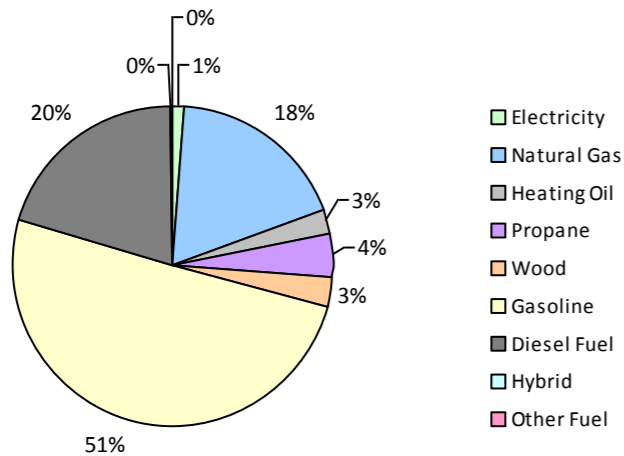
2010 GHG Emissions Sources (Total for BC)



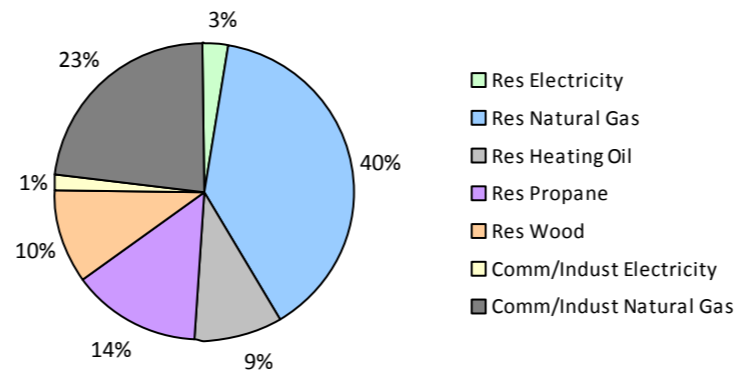
GHG Emissions Comparisons for this Community



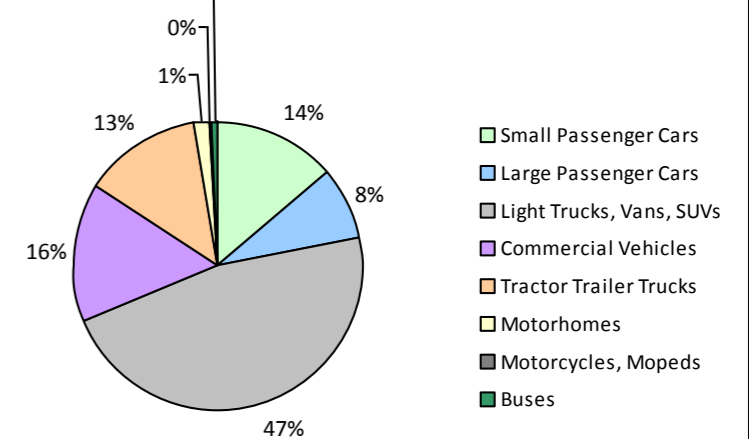
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



## Central Kootenay 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	10	9,549 L	20,900	335	22	17	17,338 L	20,500	607	39
	Gasoline	9,437	13,502,575 L	15,300	472,591	32,188	9,800	14,138,644 L	15,400	494,853	31,822
	Diesel Fuel	368	583,655 L	23,100	22,355	1,593	389	613,275 L	22,800	23,488	1,626
	Other Fuel			11,200	90	4			17,800	48	4
Large Passenger Cars	Hybrid	27	30,990 L	20,800	1,085	72	87	101,191 L	20,500	3,541	225
	Gasoline	5,611	9,076,841 L	14,300	317,689	21,586	5,490	8,700,597 L	14,100	304,520	19,561
	Diesel Fuel	74	84,421 L	11,700	3,233	229	107	118,237 L	11,500	4,528	313
	Other Fuel			11,700	196	11			14,300	43	2
Light Trucks, Vans, SUVs	Hybrid	12	24,572 L	26,300	860	57	33	62,099 L	22,400	2,174	139
	Gasoline	17,567	42,265,914 L	16,400	1,479,307	101,348	19,448	47,034,262 L	16,600	1,646,199	106,828
	Diesel Fuel	1,095	2,169,430 L	11,200	83,090	5,904	849	1,855,473 L	12,800	71,065	4,905
	Other Fuel	131	256,433 L	11,700	6,488	392	91	160,171 L	10,400	4,053	246
Commercial Vehicles	Hybrid								28,400	469	30
	Gasoline	1,405	4,102,324 L	17,100	143,581	9,639	1,813	5,307,232 L	17,300	185,754	11,872
	Diesel Fuel	2,164	7,320,193 L	18,600	280,363	19,698	2,664	9,949,242 L	20,800	381,057	25,977
	Other Fuel	69	166,352 L	12,800	4,209	254	45	99,116 L	12,100	2,507	152
Tractor Trailer Trucks	Gasoline			19,200	1,362	92			24,200	1,782	114
	Diesel Fuel	499	11,101,539 L	49,900	425,188	29,874	556	12,333,501 L	49,100	472,373	32,202
	Other Fuel			11,100	311	18			10,600	470	28
Motorhomes	Gasoline	283	780,036 L	19,100	27,301	1,820	297	825,587 L	19,300	28,895	1,835
	Diesel Fuel	184	556,626 L	16,600	21,320	1,498	208	655,996 L	16,800	25,125	1,712
	Other Fuel			19,300	534	33			20,400	487	29
Motorcycles, Mopeds	Gasoline	835	174,956 L	4,600	6,123	409	1,047	269,337 L	5,600	9,427	597
Buses	Gasoline	36	103,537 L	18,000	3,624	243	42	113,943 L	17,500	3,988	255
	Diesel Fuel	89	481,062 L	19,400	18,425	1,294	92	537,881 L	27,700	20,601	1,404
	Other Fuel			10,900	168	11			9,500	151	10
<b>Totals</b>		<b>39,896</b>	<b>92,791,005 L</b>	<b>16,084</b>	<b>3,319,828</b>	<b>228,289</b>	<b>43,075</b>	<b>92,791,005 L</b>	<b>16,458</b>	<b>3,688,205</b>	<b>241,927</b>

## Central Kootenay 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)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Wood	N/A	532,725 GJ	532,725	10,793	N/A	512,766 GJ	512,766	10,389
	Heating Oil	N/A	137,100 GJ	137,100	9,664	N/A	131,964 GJ	131,964	9,025
	Propane	N/A	241,309 GJ	241,309	14,722	N/A	232,268 GJ	232,268	14,171
	Natural Gas	11,471	828,485 GJ	828,485	41,554	11,425	766,401 GJ	766,401	38,443
	Electricity	32,469	390,707,625 kWh	1,406,546	2,865	30,994	399,927,964 kWh	1,439,740	2,913
Commercial/Small-Medium Industrial	Natural Gas	1,301	478,747 GJ	478,747	24,015	1,274	466,791 GJ	466,791	23,414
	Electricity	5,071	207,553,750 kWh	747,193	1,495	4,973	198,628,340 kWh	715,061	1,463
<b>Totals</b>		<b>50,312</b>		<b>4,372,105</b>	<b>105,108</b>	<b>48,666</b>		<b>4,264,991</b>	<b>99,818</b>

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	29,354 t	N/A	23,861	0	39,657 t	N/A	27,652
<b>Totals</b>		<b>0</b>			<b>23,861</b>	<b>0</b>			<b>27,652</b>

### Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Large Industrial	Natural Gas	12		0	0	10		0	0
	Electricity	5	63,372,720 kWh	228,142	380	7	108,091,550 kWh	389,129	649
<b>Totals</b>		<b>17</b>		<b>228,142</b>	<b>380</b>	<b>17</b>		<b>389,129</b>	<b>649</b>

Agriculture		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Enteric Fermentation	Methane	13,115	804 t	0	16,884				
<b>Totals</b>		<b>13,115</b>			<b>16,884</b>	<b>0</b>			

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Land-use Change - Deforestation	2007				2010			
	Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Settlement Deforestation	143	0 ha	0	68,864				
<b>Totals</b>	<b>143</b>			<b>68,864</b>	<b>0</b>			

**Totals for Transportation, Buildings and Solid Waste**

Fuel Type	2007 (Population: 57,613)			2010 (Population: 60,378)		
	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	65,111 L	2,280	151	180,628 L	6,791	433
Gasoline	70,006,183 L	2,451,578	167,325	76,389,602 L	2,675,418	172,884
Diesel Fuel	22,296,926 L	853,974	60,090	26,063,605 L	998,237	68,139
Other Fuel	422,785 L	11,996	723	259,287 L	7,759	471
Wood	532,725 GJ	532,725	10,793	512,766 GJ	512,766	10,389
Heating Oil	137,100 GJ	137,100	9,664	131,964 GJ	131,964	9,025
Propane	241,309 GJ	241,309	14,722	232,268 GJ	232,268	14,171
Natural Gas	1,307,232 GJ	1,307,232	65,569	1,233,192 GJ	1,233,192	61,857
Electricity	598,261,375 kWh	2,153,739	4,360	598,556,304 kWh	2,154,801	4,376
Solid Waste	29,354 t	0	23,861	39,657 t	0	27,652
<b>Grand Totals</b>		<b>7,691,933</b>	<b>357,258</b>		<b>7,953,196</b>	<b>369,397</b>

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**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	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

**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	17,195	77	16,965	77	17,180	76
Car, Truck, Van as Passenger	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

**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	360,177	16
Local Parks	6,621	0
Agricultural Land Reserve	63,560	3
Other land use	1,808,763	81
Total Parks and Protected Area	366,797	16
Total Land Area	2,239,120	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	360,177	16
Local Parks	6,621	0
Agricultural Land Reserve	63,560	3
Other land use	1,808,763	81
Total Parks and Protected Area	366,797	16
Total Land Area	2,239,120	100

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

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

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**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](mailto: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](mailto: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,