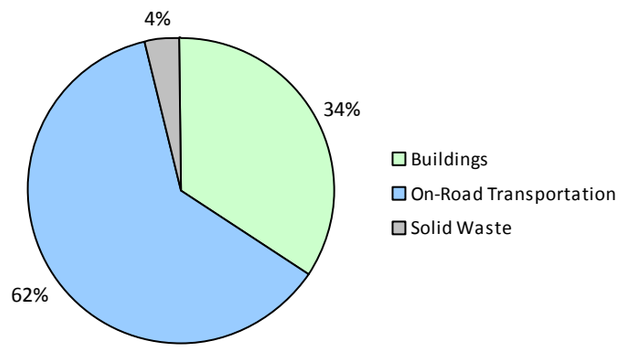
Fraser Lake Village

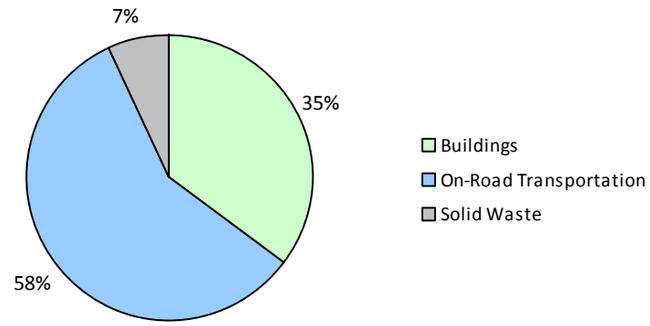
2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

2010 GHG Emissions Sources (Total for this Community)

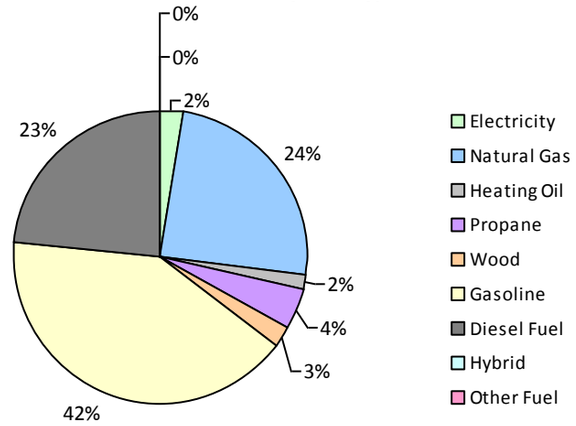


2010 GHG Emissions Sources (Total for BC)

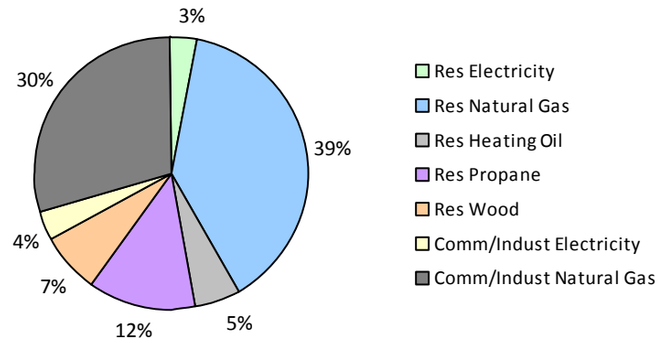


GHG Emissions Comparisons for this Community

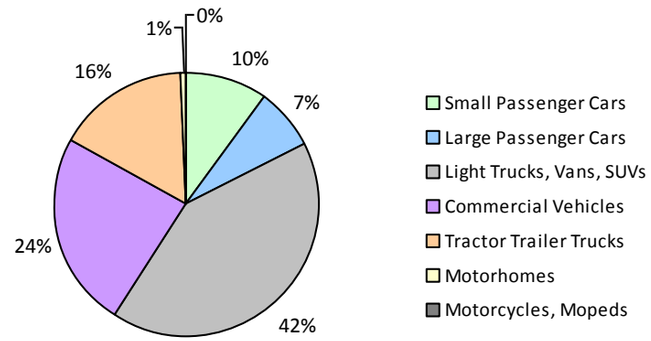
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



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Core Items

On-Road Transportation		2007					2010				
		Connections	Consumption	Avg VKT (km)	Energy (GJ)	C02e (t)	Connections	Consumption	Avg VKT (km)	Energy (GJ)	C02e (t)
Small Passenger Cars	Gasoline	162	281,892 L	18,600	9,866	661	169	283,510 L	18,000	9,923	632
	Diesel Fuel	12	22,230 L	26,600	851	61	14	25,118 L	25,900	961	67
Large Passenger Cars	Hybrid			20,200	30	2			16,900	26	0
	Gasoline	100	242,558 L	21,900	8,490	569	101	230,717 L	20,600	8,075	514
	Diesel Fuel			11,500	45	4					
Light Trucks, Vans, SUVs	Gasoline	373	1,095,201 L	20,000	38,332	2,597	423	1,193,491 L	19,300	41,771	2,693
	Diesel Fuel	18	42,103 L	13,600	1,612	115	18	47,445 L	16,500	1,817	126
	Other Fuel			10,300	136	8			11,900	52	4
Commercial Vehicles	Gasoline	53	190,933 L	21,200	6,683	449	73	243,938 L	19,600	8,538	545
	Diesel Fuel	85	340,092 L	23,000	13,026	915	108	428,736 L	22,700	16,420	1,119
Tractor Trailer Trucks	Diesel Fuel	14	324,271 L	53,400	12,420	873	18	430,895 L	54,500	16,504	1,125
Motorhomes	Gasoline			18,600	367	24					
	Diesel Fuel			22,300	327	22			17,600	553	38
Motorcycles, Mopeds	Gasoline			7,300	72	5			6,700	98	6
Totals		**817**	**2,539,280 L**	**20,873**	**92,257**	**6,305**	**924**	**2,539,280 L**	**20,357**	**104,738**	**6,869**

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Wood	N/A	14,603 GJ	14,603	296	N/A	13,613 GJ	13,613	276
	Heating Oil	N/A	3,068 GJ	3,068	216	N/A	2,860 GJ	2,860	196
	Propane	N/A	8,336 GJ	8,336	509	N/A	7,771 GJ	7,771	474
	Natural Gas	394	32,650 GJ	32,650	1,638	394	29,215 GJ	29,215	1,465
	Electricity	554	4,858,202 kWh	17,490	121	564	5,006,315 kWh	18,023	125
Commercial/Small-Medium Industrial	Natural Gas	56	21,973 GJ	21,973	1,102	56	22,647 GJ	22,647	1,136
	Electricity	98	5,225,138 kWh	18,810	131	103	5,518,909 kWh	19,868	138
Totals		**1,102**		**116,930**	**4,013**	**1,117**		**113,997**	**3,810**

Fraser Lake Village

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Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	1,212 t	N/A	175	0	1,526 t	N/A	400
Totals		**0**			**175**	**0**			**400**

Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Large Industrial	Natural Gas	1		0	0	1		0	0
	Electricity	2		0	0	2		0	0
Totals		**3**			**0**	**3**			**0**

Totals for Transportation, Buildings and Solid Waste

Fuel Type	2007 (Population: 1,135)			2010 (Population: 1,161)		
	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	0 L	30	2	0 L	26	0
Gasoline	1,810,584 L	63,810	4,305	1,951,656 L	68,405	4,390
Diesel Fuel	728,696 L	28,281	1,990	932,194 L	36,255	2,475
Other Fuel	0 L	136	8	0 L	52	4
Wood	14,603 GJ	14,603	296	13,613 GJ	13,613	276
Heating Oil	3,068 GJ	3,068	216	2,860 GJ	2,860	196
Propane	8,336 GJ	8,336	509	7,771 GJ	7,771	474
Natural Gas	54,623 GJ	54,623	2,740	51,862 GJ	51,862	2,601
Electricity	10,083,340 kWh	36,300	252	10,525,224 kWh	37,891	263
Solid Waste	1,212 t	0	175	1,526 t	0	400
Grand Totals		**209,187**	**10,493**		**218,735**	**11,079**

Fraser Lake Village

2010 Community Energy and Emissions Inventory

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	300	38	310	63	300	64
Semi-Detached House	0	0	5	1	0	0
Row House	50	6	90	18	85	18
Apartment, Duplex	0	0	0	0	0	0
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	115	15	60	12	60	13
Other Single Attached House	0	0	5	1	0	0
Movable Dwelling	20	3	20	4	25	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	415	70	405	71	395	77
Car, Truck,Van as Passenger	75	13	65	11	40	8
Public Transit	0	0	0	0	0	0
Walked	85	14	100	18	60	12
Bicycle	10	2	0	0	0	0
Motorcycle	0	0	0	0	0	0
Taxicab	0	0	0	0	0	0
Other Method	10	2	0	0	15	3

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	0	0
Local Parks	0	0
Agricultural Land Reserve	24	5
Other land use	471	95
Total Parks and Protected Area	0	0
Total Land Area	495	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	0	0
Local Parks	0	0
Agricultural Land Reserve	24	5
Other land use	471	95
Total Parks and Protected Area	0	0
Total Land Area	495	100

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

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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

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,