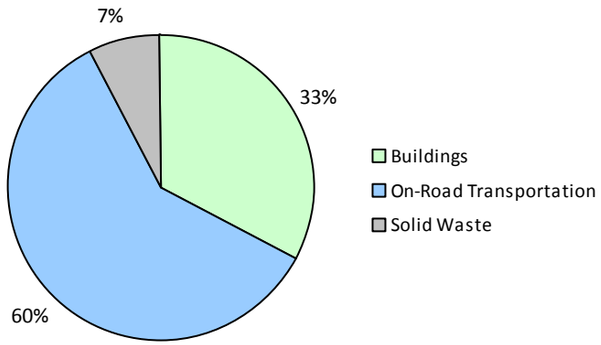
Lumby Village

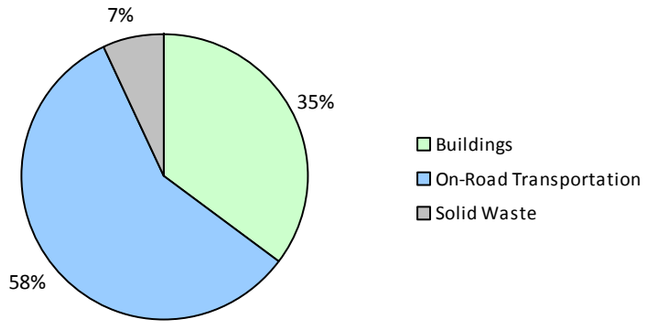
2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

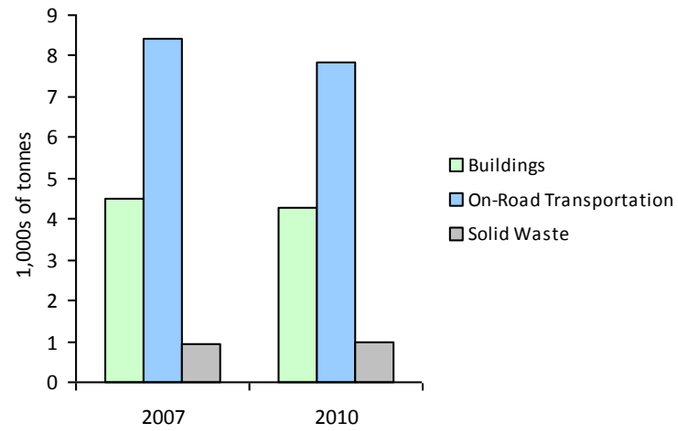
2010 GHG Emissions Sources (Total for this Community)



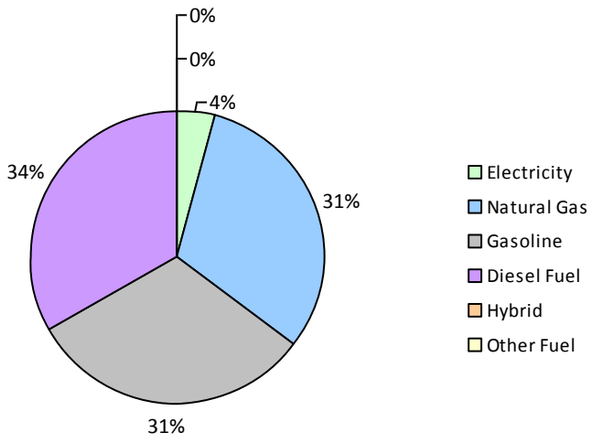
2010 GHG Emissions Sources (Total for BC)



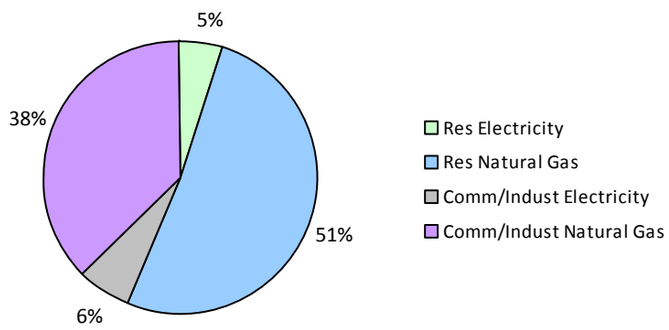
GHG Emissions Comparisons for this Community



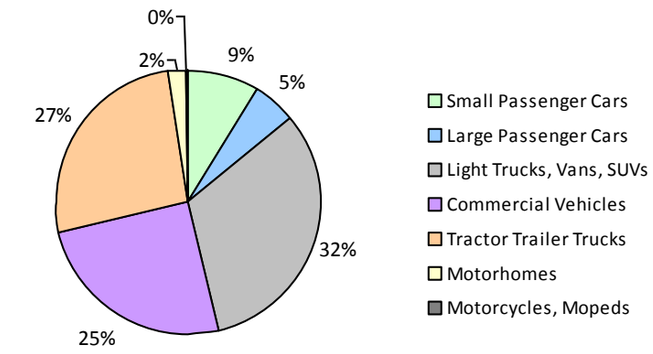
2010 Total Emissions by Fuel Type



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	202	284,136 L	14,800	9,945	678	203	292,641 L	15,100	10,243	658
	Diesel Fuel	13	15,622 L	17,300	598	42	11	15,215 L	20,500	583	40
Large Passenger Cars	Hybrid			24,700	54	3			31,600	62	4
	Gasoline	106	184,876 L	15,300	6,470	441	102	173,232 L	14,800	6,063	391
	Diesel Fuel			11,300	162	12			13,500	145	11
Light Trucks, Vans, SUVs	Gasoline	375	932,392 L	17,100	32,633	2,238	410	1,021,286 L	17,200	35,746	2,320
	Diesel Fuel	33	83,858 L	14,400	3,212	228	26	70,084 L	16,000	2,685	185
	Other Fuel			10,200	177	11			9,400	82	5
Commercial Vehicles	Gasoline	44	126,316 L	16,900	4,421	297	52	156,947 L	17,800	5,493	350
	Diesel Fuel	115	559,251 L	27,400	21,419	1,505	125	614,947 L	27,700	23,552	1,606
	Other Fuel			17,500	161	10			12,800	61	4
Tractor Trailer Trucks	Gasoline			13,000	96	8					
	Diesel Fuel	35	1,016,824 L	67,800	38,944	2,736	31	798,962 L	59,800	30,601	2,087
Motorhomes	Gasoline			19,400	900	59			20,100	927	60
	Diesel Fuel	11	41,491 L	20,000	1,588	111			21,000	1,461	99
Motorcycles, Mopeds	Gasoline	19	4,913 L	5,700	172	11	19	5,413 L	6,300	190	12
Buses	Gasoline			16,800	90	7					
	Diesel Fuel			27,000	266	18					
Totals		**953**	**3,249,679 L**	**19,223**	**121,308**	**8,415**	**979**	**3,249,679 L**	**19,030**	**117,894**	**7,832**

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Natural Gas	602	45,415 GJ	45,415	2,278	622	43,288 GJ	43,288	2,171
	Electricity	860	9,016,998 kWh	32,461	225	912	9,080,661 kWh	32,690	227
Commercial/Small-Medium Industrial	Natural Gas	97	33,795 GJ	33,795	1,695	93	32,214 GJ	32,214	1,616
	Electricity	170	12,778,505 kWh	46,003	319	180	10,849,099 kWh	39,057	271
Totals		**1,729**		**157,674**	**4,517**	**1,807**		**147,249**	**4,285**

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	1,195 t	N/A	938	0	1,096 t	N/A	976
Totals		**0**			**938**	**0**			**976**

Totals for Transportation, Buildings and Solid Waste

Fuel Type	2007 (Population: 1,710)			2010 (Population: 1,815)		
	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	0 L	54	3	0 L	62	4
Gasoline	1,532,633 L	54,727	3,739	1,649,519 L	58,662	3,791
Diesel Fuel	1,717,046 L	66,189	4,652	1,499,208 L	59,027	4,028
Other Fuel	0 L	338	21	0 L	143	9
Natural Gas	79,210 GJ	79,210	3,973	75,502 GJ	75,502	3,787
Electricity	21,795,503 kWh	78,464	544	19,929,760 kWh	71,747	498
Solid Waste	1,195 t	0	938	1,096 t	0	976
Grand Totals		**278,982**	**13,870**		**265,143**	**13,093**

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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	455	42	460	69	475	69
Semi-Detached House	40	4	60	9	80	12
Row House	35	3	20	3	5	1
Apartment, Duplex	0	0	5	1	5	1
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	20	2	70	11	75	11
Other Single Attached House	0	0	5	1	0	0
Movable Dwelling	70	7	45	7	50	7

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	480	80	360	82	565	82
Car, Truck,Van as Passenger	60	10	25	6	65	9
Public Transit	0	0	0	0	0	0
Walked	60	10	55	13	60	9
Bicycle	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	0
Taxicab	0	0	0	0	0	0
Other Method	0	0	0	0	0	0

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	51	8
Other land use	559	92
Total Parks and Protected Area	0	0
Total Land Area	610	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	51	8
Other land use	559	92
Total Parks and Protected Area	0	0
Total Land Area	610	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,