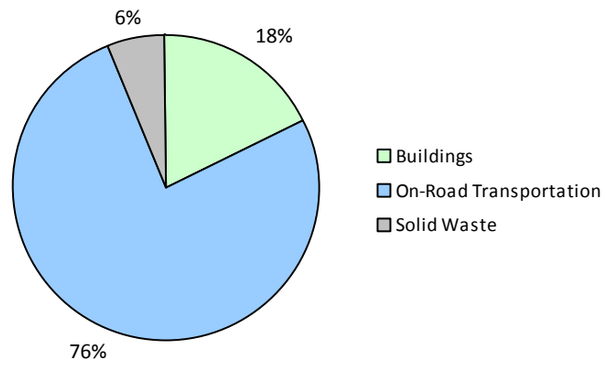
Sicamous District Municipality

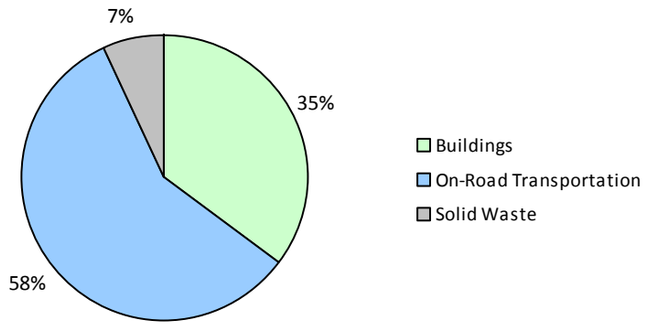
2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

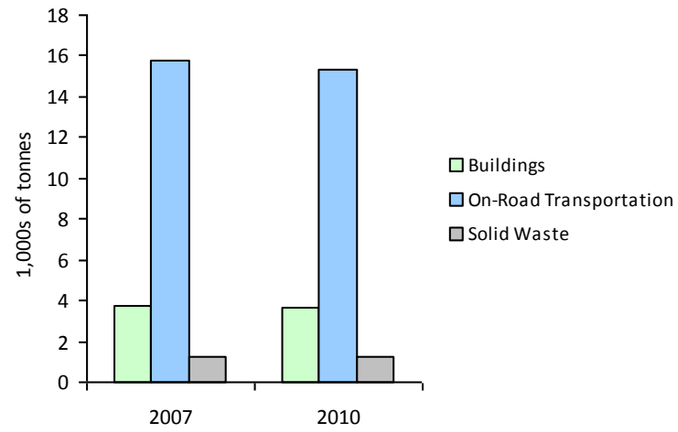
2010 GHG Emissions Sources (Total for this Community)



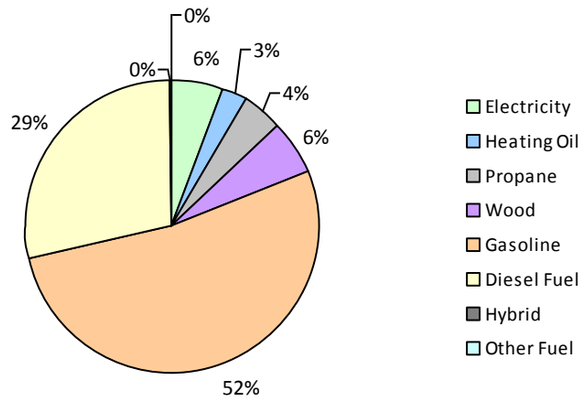
2010 GHG Emissions Sources (Total for BC)



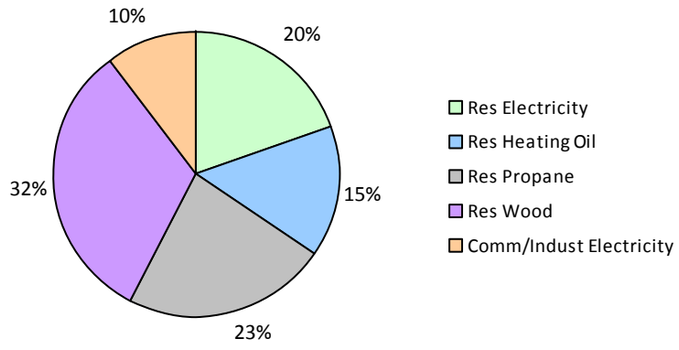
GHG Emissions Comparisons for this Community



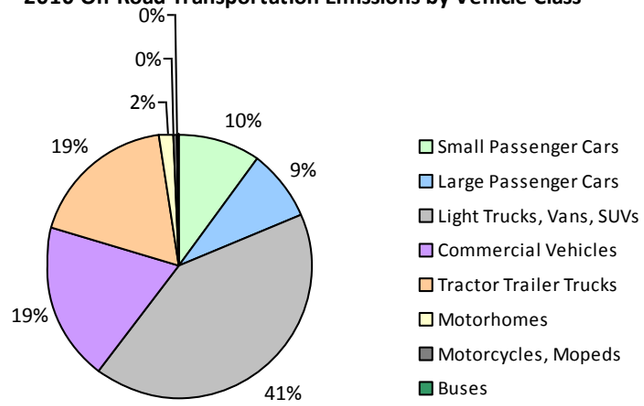
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



Sicamous District Municipality

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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	Hybrid			28,000	46	4			19,600	71	4
	Gasoline	489	740,375 L	16,100	25,914	1,762	453	668,829 L	15,700	23,409	1,504
	Diesel Fuel	20	29,564 L	21,400	1,132	81	14	22,467 L	22,900	860	59
	Other Fuel			8,900	21	0					
Large Passenger Cars	Hybrid								26,800	105	8
	Gasoline	376	695,482 L	16,200	24,342	1,657	337	579,295 L	15,100	20,275	1,305
	Diesel Fuel			14,400	259	18			17,100	65	4
Light Trucks, Vans, SUVs	Hybrid								29,100	198	12
	Gasoline	959	2,700,852 L	19,100	94,529	6,480	969	2,631,513 L	18,500	92,103	5,981
	Diesel Fuel	65	157,214 L	13,700	6,021	429	46	120,000 L	15,200	4,597	318
	Other Fuel			14,900	320	20			12,500	208	13
Commercial Vehicles	Gasoline	109	345,840 L	18,600	12,105	812	111	344,857 L	18,300	12,070	770
	Diesel Fuel	152	618,210 L	23,100	23,677	1,664	182	819,479 L	25,600	31,385	2,139
	Other Fuel			17,900	85	5			10,800	206	13
Tractor Trailer Trucks	Gasoline								110,000	1,088	70
	Diesel Fuel	39	903,824 L	54,700	34,617	2,432	41	1,056,789 L	61,600	40,476	2,759
Motorhomes	Gasoline	22	66,725 L	20,900	2,335	156	21	65,712 L	21,200	2,300	147
	Diesel Fuel	20	78,240 L	21,300	2,997	211	11	44,602 L	20,800	1,708	116
	Other Fuel			19,500	75	4					
Motorcycles, Mopeds	Gasoline	48	11,271 L	5,200	394	27	59	14,780 L	5,500	517	33
Buses	Gasoline			13,400	151	10			12,400	74	4
	Diesel Fuel			12,600	136	8			20,400	438	30
Totals		**2,299**	**6,347,597 L**	**18,446**	**229,156**	**15,780**	**2,244**	**6,347,597 L**	**18,432**	**232,153**	**15,289**

Sicamous District Municipality

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	60,155 GJ	60,155	1,219	N/A	57,901 GJ	57,901	1,173
	Heating Oil	N/A	8,123 GJ	8,123	573	N/A	7,819 GJ	7,819	535
	Propane	N/A	14,312 GJ	14,312	873	N/A	13,776 GJ	13,776	840
	Electricity	2,020	27,895,610 kWh	100,424	697	2,112	28,565,784 kWh	102,837	714
Commercial/Small-Medium Industrial	Electricity	415	15,430,326 kWh	55,549	386	402	14,807,620 kWh	53,307	370
Totals		**2,435**		**238,563**	**3,748**	**2,514**		**235,640**	**3,632**

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	2,283 t	N/A	1,274	0	1,846 t	N/A	1,211
Totals		**0**			**1,274**	**0**			**1,211**

Totals for Transportation, Buildings and Solid Waste

Fuel Type	2007 (Population: 2,749)			2010 (Population: 2,963)		
	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	0 L	46	4	0 L	374	24
Gasoline	4,560,545 L	159,770	10,904	4,304,986 L	151,836	9,814
Diesel Fuel	1,787,052 L	68,839	4,843	2,063,337 L	79,529	5,425
Other Fuel	0 L	501	29	0 L	414	26
Wood	60,155 GJ	60,155	1,219	57,901 GJ	57,901	1,173
Heating Oil	8,123 GJ	8,123	573	7,819 GJ	7,819	535
Propane	14,312 GJ	14,312	873	13,776 GJ	13,776	840
Electricity	43,325,936 kWh	155,973	1,083	43,373,404 kWh	156,144	1,084
Solid Waste	2,283 t	0	1,274	1,846 t	0	1,211
Grand Totals		**467,719**	**20,802**		**467,793**	**20,132**

Sicamous District Municipality

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	855	74	790	65	760	62
Semi-Detached House	20	2	45	4	45	4
Row House	100	9	90	7	85	7
Apartment, Duplex	0	0	5	0	15	1
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	50	4	70	6	105	9
Other Single Attached House	35	3	20	2	10	1
Movable Dwelling	100	9	190	16	210	17

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	625	71	650	73	800	78
Car, Truck,Van as Passenger	75	9	45	5	60	6
Public Transit	0	0	0	0	10	1
Walked	155	18	130	15	85	8
Bicycle	20	2	20	2	50	5
Motorcycle	0	0	0	0	10	1
Taxicab	0	0	0	0	0	0
Other Method	0	0	45	5	10	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	0	0
Local Parks	0	0
Agricultural Land Reserve	452	27
Other land use	1,222	73
Total Parks and Protected Area	0	0
Total Land Area	1,674	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	452	27
Other land use	1,222	73
Total Parks and Protected Area	0	0
Total Land Area	1,674	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,