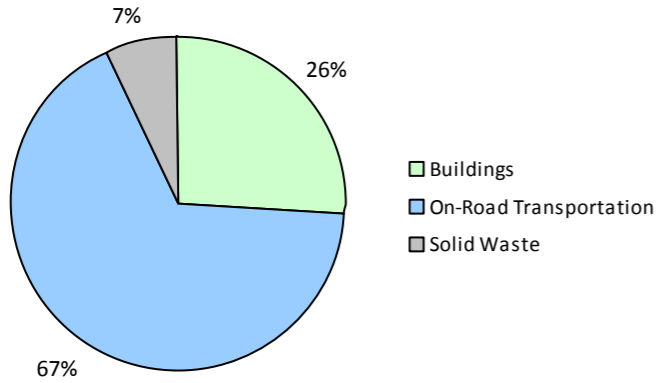


Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

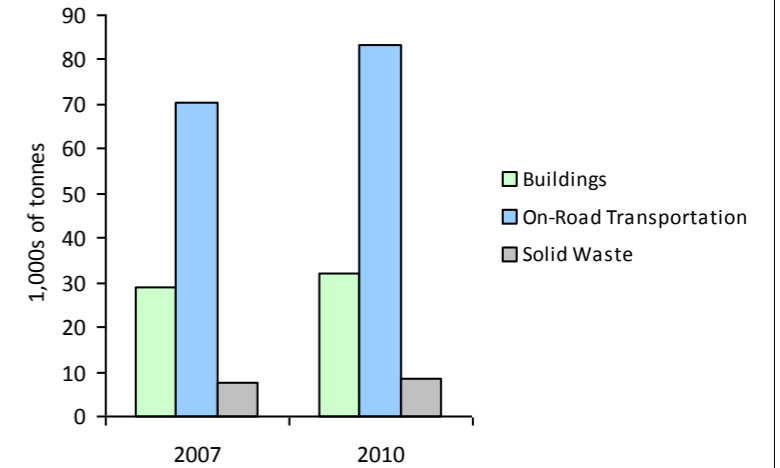
2010 GHG Emissions Sources (Total for this Community)



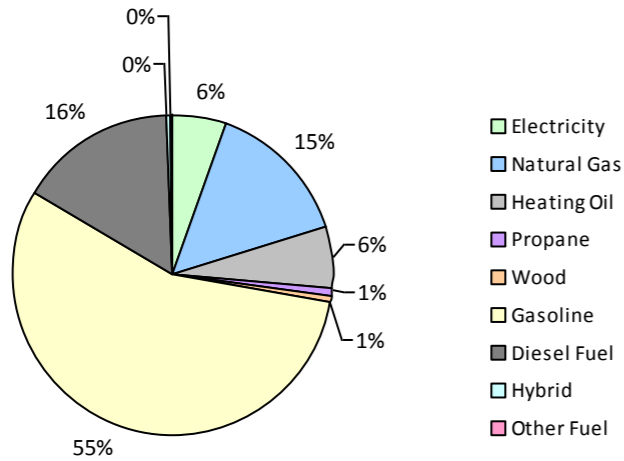
2010 GHG Emissions Sources (Total for BC)



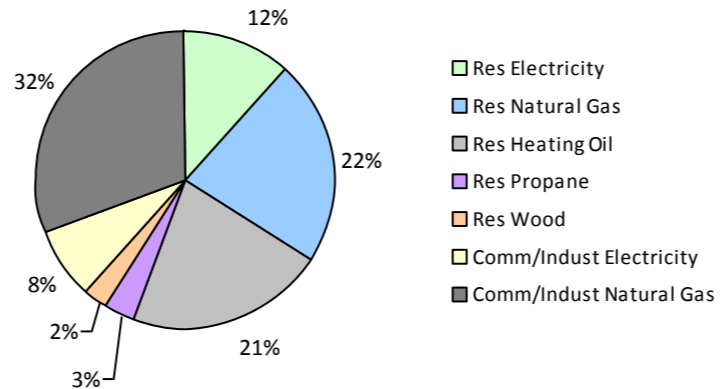
GHG Emissions Comparisons for this Community



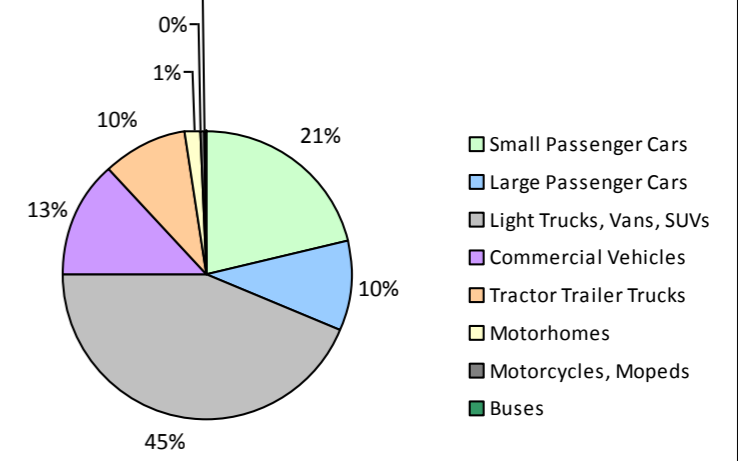
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



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			15,600	128	8	15	10,772 L	13,800	378	23
	Gasoline	5,680	6,553,947 L	12,200	229,388	15,608	6,664	7,696,348 L	12,200	269,373	17,300
	Diesel Fuel	152	155,312 L	15,500	5,948	425	171	171,745 L	15,300	6,577	455
	Other Fuel			11,700	60	4			13,900	73	4
Large Passenger Cars	Hybrid	15	21,119 L	27,000	740	50	59	125,570 L	35,900	4,395	280
	Gasoline	2,087	3,155,988 L	13,100	110,459	7,510	2,322	3,518,840 L	13,200	123,160	7,909
	Diesel Fuel	21	18,176 L	8,600	696	50	31	25,662 L	8,500	983	68
	Other Fuel			25,700	882	54			18,700	280	16
Light Trucks, Vans, SUVs	Hybrid			15,100	293	19	23	31,123 L	16,200	1,090	71
	Gasoline	6,378	12,340,865 L	13,800	431,930	29,566	7,963	15,298,840 L	13,800	535,459	34,716
	Diesel Fuel	338	703,405 L	12,000	26,940	1,914	243	550,986 L	13,400	21,102	1,457
	Other Fuel	61	102,425 L	10,100	2,592	158	40	62,632 L	9,400	1,584	96
Commercial Vehicles	Gasoline	418	956,180 L	13,700	33,465	2,247	603	1,405,774 L	14,000	49,202	3,144
	Diesel Fuel	554	1,984,713 L	18,700	76,014	5,341	731	2,947,322 L	21,200	112,882	7,696
	Other Fuel	25	48,424 L	10,400	1,226	74	21	37,883 L	9,800	957	58
Tractor Trailer Trucks	Gasoline			13,500	273	19			12,500	222	14
	Diesel Fuel	222	2,111,091 L	22,900	80,854	5,682	251	3,086,698 L	30,300	118,221	8,058
Motorhomes	Gasoline	118	265,665 L	16,400	9,298	620	113	256,306 L	16,500	8,971	570
	Diesel Fuel	96	280,781 L	16,800	10,753	755	82	237,999 L	16,500	9,115	621
	Other Fuel			19,800	222	12			17,700	199	12
Motorcycles, Mopeds	Gasoline	522	118,641 L	5,300	4,152	277	691	180,497 L	6,100	6,318	400
Buses	Gasoline	15	36,680 L	16,500	1,284	87	16	38,420 L	15,600	1,345	87
	Diesel Fuel			18,600	503	35			18,300	1,247	85
Totals		16,702	28,853,412 L	13,188	1,028,100	70,515	20,039	28,853,412 L	13,498	1,273,133	83,140

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	39,489 GJ	39,489	800	N/A	38,226 GJ	38,226	774
	Heating Oil	N/A	103,002 GJ	103,002	7,261	N/A	99,710 GJ	99,710	6,819
	Propane	N/A	17,793 GJ	17,793	1,086	N/A	17,225 GJ	17,225	1,051
	Natural Gas	2,539	120,584 GJ	120,584	6,049	3,244	140,357 GJ	140,357	7,040
	Electricity	9,204	143,601,524 kWh	516,965	3,590	11,047	158,179,611 kWh	569,446	3,955
Commercial/Small-Medium Industrial	Natural Gas	313	153,238 GJ	153,238	7,686	337	198,763 GJ	198,763	9,970
	Electricity	1,140	94,162,409 kWh	338,984	2,354	1,275	102,698,501 kWh	369,714	2,568
Totals		13,196		1,290,055	28,826	15,903		1,433,441	32,177

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Community Solid Waste	Solid Waste	0	11,086 t	N/A	7,417	0	9,602 t	N/A	8,500
Totals		0			7,417	0			8,500

Totals for Transportation, Buildings and Solid Waste

Fuel Type	2007 (Population: 24,764)			2010 (Population: 29,158)		
	Consumption	Energy (GJ)	CO2e (t)	Consumption	Energy (GJ)	CO2e (t)
Hybrid	21,119 L	1,161	77	167,465 L	5,863	374
Gasoline	23,427,966 L	820,249	55,934	28,395,025 L	994,050	64,140
Diesel Fuel	5,253,478 L	201,708	14,202	7,020,412 L	270,127	18,440
Other Fuel	150,849 L	4,982	302	100,515 L	3,093	186
Wood	39,489 GJ	39,489	800	38,226 GJ	38,226	774
Heating Oil	103,002 GJ	103,002	7,261	99,710 GJ	99,710	6,819
Propane	17,793 GJ	17,793	1,086	17,225 GJ	17,225	1,051
Natural Gas	273,822 GJ	273,822	13,735	339,120 GJ	339,120	17,010
Electricity	237,763,933 kWh	855,949	5,944	260,878,112 kWh	939,160	6,523
Solid Waste	11,086 t	0	7,417	9,602 t	0	8,500
Grand Totals		2,318,155	106,758		2,706,574	123,817

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	4,230	40	4,365	62	4,450	51
Semi-Detached House	475	4	695	10	675	8
Row House	365	3	490	7	485	6
Apartment, Duplex	720	7	830	12	1,885	22
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	320	3	330	5	800	9
Other Single Attached House	30	0	15	0	20	0
Movable Dwelling	255	2	325	5	330	4

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	6,540	81	7,310	81	9,400	78
Car, Truck, Van as Passenger	615	8	525	6	980	8
Public Transit	495	6	615	7	690	6
Walked	200	2	295	3	575	5
Bicycle	160	2	245	3	275	2
Motorcycle	20	0	60	1	140	1
Taxicab	0	0	0	0	10	0
Other Method	55	1	10	0	35	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	441	11
Local Parks	320	8
Agricultural Land Reserve	131	3
Other land use	3,179	78
Total Parks and Protected Area	762	19
Total Land Area	4,072	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	441	11
Local Parks	320	8
Agricultural Land Reserve	131	3
Other land use	3,179	78
Total Parks and Protected Area	762	19
Total Land Area	4,072	100

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

Commute Distance

Shorter commute distances generally reduce GHG emissions by increasing the likelihood of people walking, cycling or using transit. Commute distance is also indicative of the 'completeness' of a community from an employment perspective.

	2006	
	Units	%
Less than 5 km	2,960	29
5 to 9.9 km	2,875	28
25 km or more	190	2
15 to 24.9 km	650	6
10 to 14.9 km	3,605	35

Langford City
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

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,