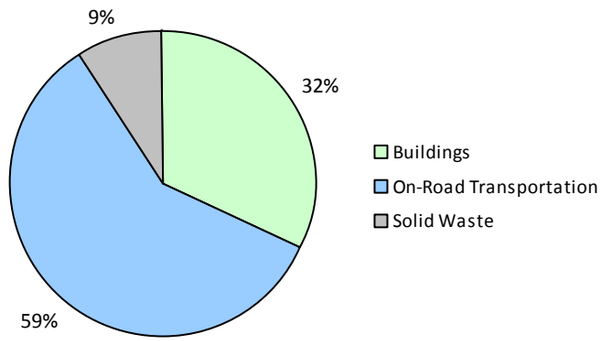
Campbell River City

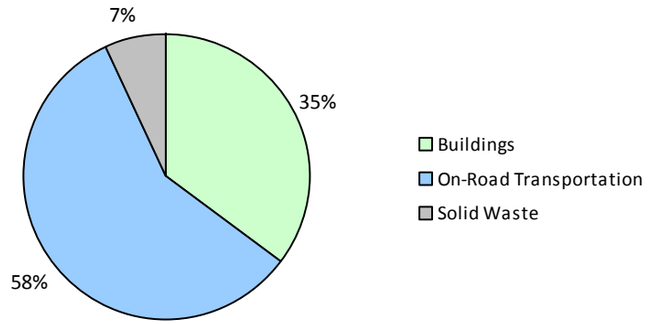
2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

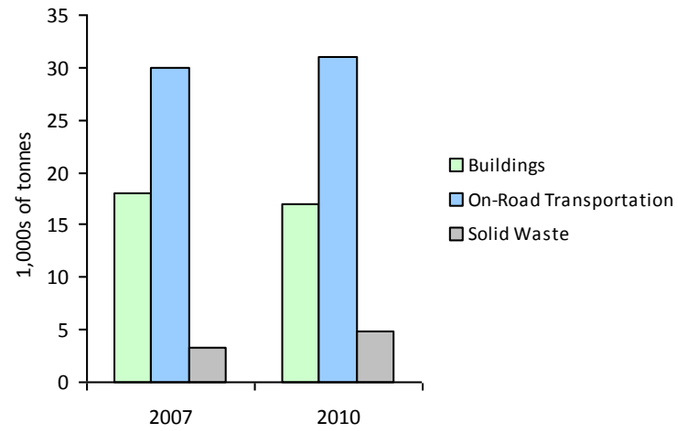
2010 GHG Emissions Sources (Total for this Community)



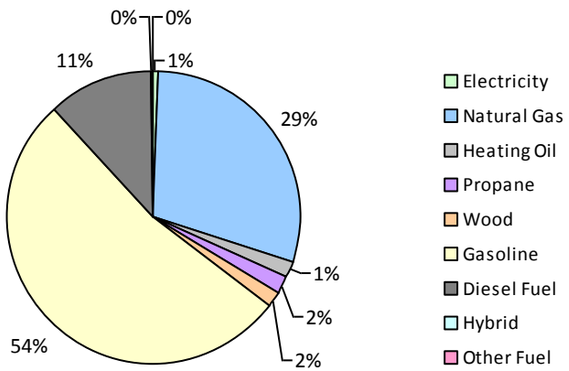
2010 GHG Emissions Sources (Total for BC)



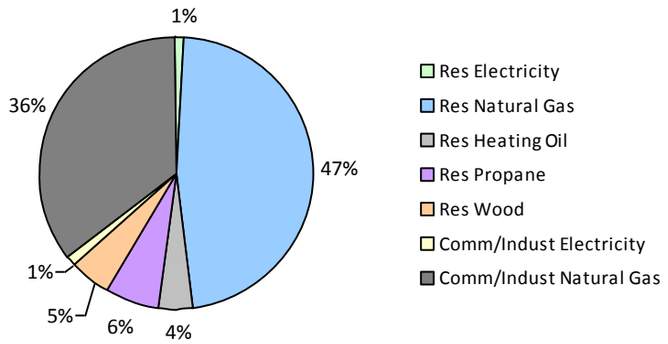
GHG Emissions Comparisons for this Community



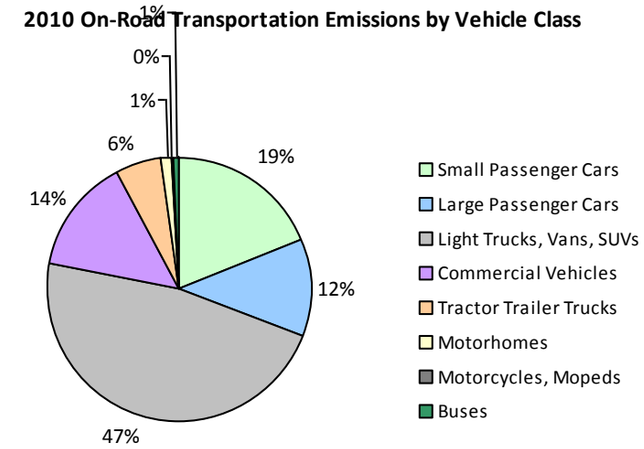
2010 Total Emissions by Fuel Type



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	Hybrid								30,900	180	10
	Gasoline	1,616	2,464,869 L	16,300	86,271	5,858	1,671	2,573,314 L	16,500	90,066	5,779
	Diesel Fuel	35	69,470 L	29,000	2,661	190	34	65,601 L	27,900	2,513	174
Large Passenger Cars	Hybrid			21,400	81	6	13	16,122 L	21,400	564	36
	Gasoline	1,008	1,711,698 L	15,200	59,908	4,060	949	1,580,946 L	14,800	55,333	3,547
	Diesel Fuel			12,300	139	10			14,200	200	14
Light Trucks, Vans, SUVs	Hybrid								27,400	173	11
	Gasoline	2,220	5,694,074 L	17,500	199,293	13,627	2,424	6,245,759 L	17,800	218,602	14,173
	Diesel Fuel	114	231,350 L	11,600	8,861	630	75	168,030 L	13,000	6,435	444
	Other Fuel			12,800	472	29			11,600	394	25
Commercial Vehicles	Gasoline	163	517,095 L	18,600	18,099	1,216	221	680,787 L	18,200	23,827	1,523
	Diesel Fuel	232	785,173 L	18,500	30,071	2,112	287	1,094,250 L	21,200	41,910	2,857
	Other Fuel			12,700	352	22			13,300	298	19
Tractor Trailer Trucks	Gasoline								20,100	266	17
	Diesel Fuel	46	616,210 L	30,900	23,601	1,658	53	661,823 L	29,000	25,349	1,729
	Other Fuel			9,900	157	10			10,000	252	15
Motorhomes	Gasoline	28	79,126 L	19,700	2,769	184	34	98,298 L	20,000	3,441	219
	Diesel Fuel	19	59,483 L	17,400	2,278	161	23	70,169 L	16,600	2,687	183
Motorcycles, Mopeds	Gasoline	87	18,849 L	4,700	660	45	111	29,458 L	5,800	1,031	65
Buses	Gasoline	18	52,237 L	18,300	1,829	124	19	51,842 L	17,400	1,814	116
	Diesel Fuel			17,300	748	53			15,700	699	48
Totals		**5,586**	**12,299,634 L**	**16,687**	**438,250**	**29,995**	**5,914**	**12,299,634 L**	**17,018**	**476,034**	**31,004**

Campbell River City

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	40,799 GJ	40,799	827	N/A	39,270 GJ	39,270	796
	Heating Oil	N/A	10,505 GJ	10,505	740	N/A	10,111 GJ	10,111	691
	Propane	N/A	18,498 GJ	18,498	1,129	N/A	17,804 GJ	17,804	1,086
	Natural Gas	2,446	175,530 GJ	175,530	8,804	2,438	157,512 GJ	157,512	7,901
	Electricity	4,043	37,857,389 kWh	136,286	227	3,572	37,502,570 kWh	135,009	225
Commercial/Small-Medium Industrial	Natural Gas	348	121,282 GJ	121,282	6,084	346	122,035 GJ	122,035	6,121
	Electricity	747	46,390,472 kWh	167,006	278	725	37,306,177 kWh	134,302	224
Totals		**7,584**		**669,906**	**18,089**	**7,081**		**616,043**	**17,044**

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	3,826 t	N/A	3,326	0	5,175 t	N/A	4,816
Totals		**0**			**3,326**	**0**			**4,816**

Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Large Industrial	Natural Gas	3		0	0	2		0	0
	Electricity	1		0	0	3	77,007,210 kWh	277,226	462
Totals		**4**			**0**	**5**		**277,226**	**462**

Campbell River City

2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

Totals for Transportation, Buildings and Solid Waste

Fuel Type	2007 (Population: 7,509)			2010 (Population: 7,879)		
	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	0 L	81	6	16,122 L	917	57
Gasoline	10,537,948 L	368,829	25,114	11,260,404 L	394,380	25,439
Diesel Fuel	1,761,686 L	68,359	4,814	2,059,873 L	79,793	5,449
Other Fuel	0 L	981	61	0 L	944	59
Wood	40,799 GJ	40,799	827	39,270 GJ	39,270	796
Heating Oil	10,505 GJ	10,505	740	10,111 GJ	10,111	691
Propane	18,498 GJ	18,498	1,129	17,804 GJ	17,804	1,086
Natural Gas	296,812 GJ	296,812	14,888	279,547 GJ	279,547	14,022
Electricity	84,247,861 kWh	303,292	505	74,808,747 kWh	269,311	449
Solid Waste	3,826 t	0	3,326	5,175 t	0	4,816
Grand Totals		**1,108,156**	**51,410**		**1,092,077**	**52,864**

Campbell River City

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	2,025	42	2,200	76	2,280	75
Semi-Detached House	45	1	95	3	60	2
Row House	180	4	200	7	195	6
Apartment, Duplex	125	3	140	5	115	4
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	310	6	250	9	270	9
Other Single Attached House	15	0	5	0	15	0
Movable Dwelling	90	2	10	0	125	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	2,355	82	2,370	78	2,600	84
Car, Truck,Van as Passenger	255	9	245	8	210	7
Public Transit	15	1	35	1	0	0
Walked	195	7	275	9	195	6
Bicycle	40	1	50	2	65	2
Motorcycle	0	0	10	0	0	0
Taxicab	10	0	10	0	0	0
Other Method	15	1	30	1	40	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	13	1
Agricultural Land Reserve	8	0
Other land use	2,226	99
Total Parks and Protected Area	13	1
Total Land Area	2,247	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	13	1
Agricultural Land Reserve	8	0
Other land use	2,226	99
Total Parks and Protected Area	13	1
Total Land Area	2,247	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,