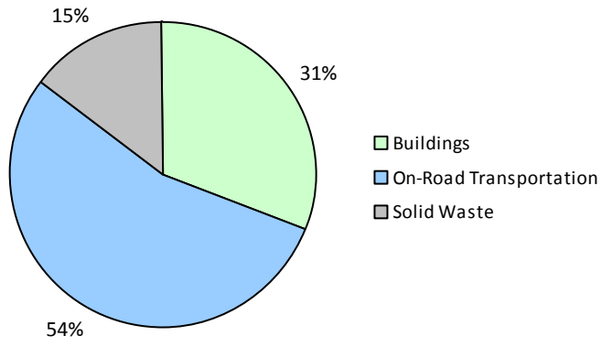
Port Alberni City

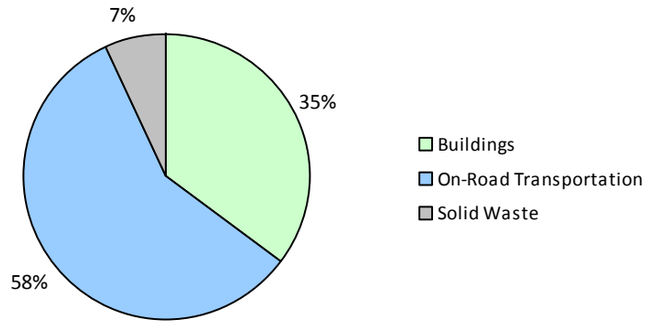
2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

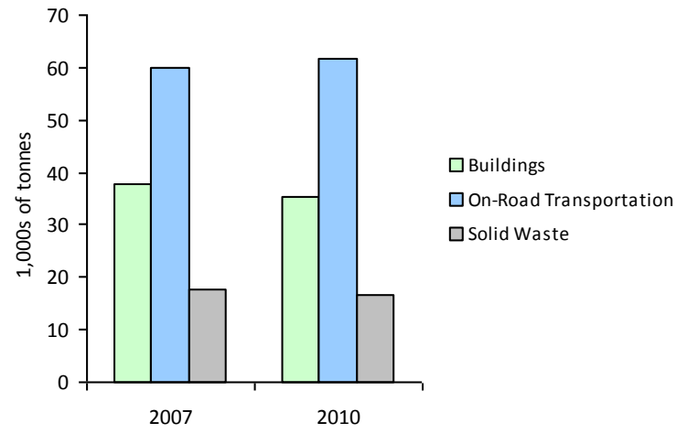
2010 GHG Emissions Sources (Total for this Community)



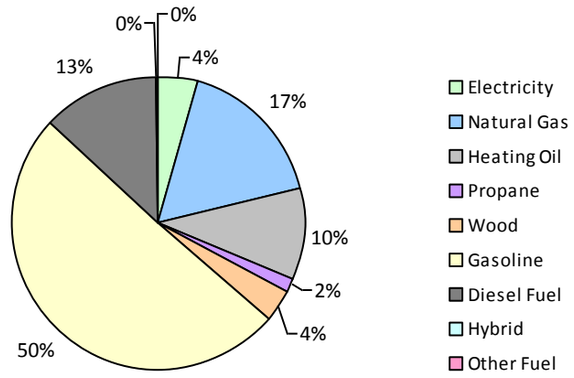
2010 GHG Emissions Sources (Total for BC)



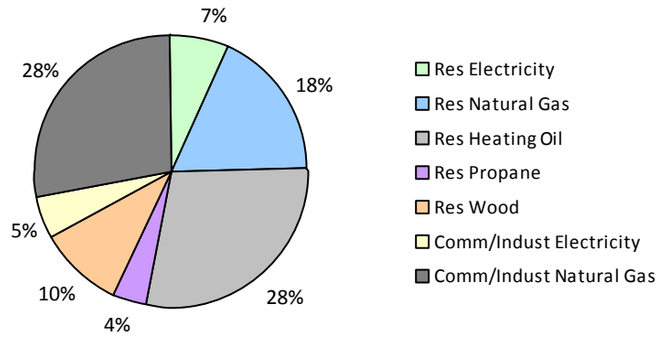
GHG Emissions Comparisons for this Community



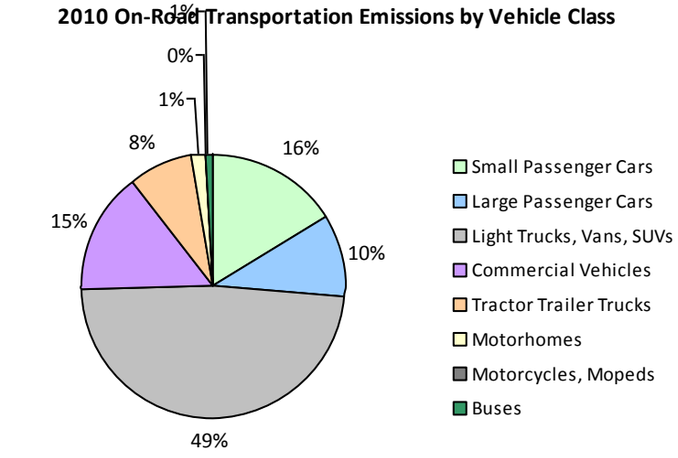
2010 Total Emissions by Fuel Type



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			17,700	94	6			20,600	60	4
	Gasoline	3,108	4,239,870 L	14,500	148,395	10,101	3,083	4,377,435 L	15,200	153,210	9,838
	Diesel Fuel	59	93,102 L	23,800	3,566	254	71	116,264 L	24,400	4,454	307
	Other Fuel								16,300	43	3
Large Passenger Cars	Hybrid	13	16,688 L	23,900	584	40	39	52,063 L	23,900	1,822	115
	Gasoline	1,742	2,760,240 L	13,800	96,608	6,589	1,614	2,596,310 L	14,200	90,871	5,849
	Diesel Fuel	26	26,791 L	10,400	1,026	73	13	13,633 L	11,000	523	37
	Other Fuel			22,700	274	17					
Light Trucks, Vans, SUVs	Hybrid			26,600	75	6			20,800	369	25
	Gasoline	4,950	11,390,122 L	15,800	398,653	27,333	5,297	12,487,854 L	16,400	437,075	28,389
	Diesel Fuel	310	610,861 L	11,000	23,396	1,663	206	442,919 L	12,300	16,964	1,170
	Other Fuel	37	70,177 L	11,400	1,775	108	25	46,223 L	10,900	1,169	70
Commercial Vehicles	Gasoline	492	1,429,448 L	17,100	50,030	3,358	638	1,825,806 L	16,900	63,903	4,085
	Diesel Fuel	414	1,307,893 L	17,400	50,093	3,519	551	1,929,665 L	19,400	73,906	5,037
	Other Fuel	16	34,240 L	11,400	867	53			11,800	434	26
Tractor Trailer Trucks	Gasoline			10,000	181	11			15,800	320	20
	Diesel Fuel	114	1,905,386 L	38,300	72,977	5,128	116	1,945,374 L	39,000	74,508	5,079
Motorhomes	Gasoline	95	226,204 L	16,700	7,916	528	94	225,230 L	16,800	7,883	501
	Diesel Fuel	53	159,058 L	16,800	6,093	428	50	159,448 L	16,800	6,106	416
	Other Fuel			14,700	18	1					
Motorcycles, Mopeds	Gasoline	173	35,437 L	4,500	1,241	83	200	49,830 L	5,600	1,744	111
Buses	Gasoline	29	92,011 L	18,800	3,221	217	35	95,763 L	16,300	3,352	213
	Diesel Fuel	26	114,838 L	17,600	4,398	309	19	89,288 L	17,400	3,420	234
	Other Fuel			11,400	98	6					
Totals		**11,657**	**24,512,366 L**	**15,232**	**871,579**	**59,831**	**12,051**	**24,512,366 L**	**15,990**	**942,136**	**61,529**

Port Alberni City

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Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Wood	N/A	175,951 GJ	175,951	3,565	N/A	170,327 GJ	170,327	3,451
	Heating Oil	N/A	146,839 GJ	146,839	10,351	N/A	142,146 GJ	142,146	9,721
	Propane	N/A	25,321 GJ	25,321	1,545	N/A	24,511 GJ	24,511	1,495
	Natural Gas	2,225	138,277 GJ	138,277	6,936	2,299	124,471 GJ	124,471	6,244
	Electricity	8,066	104,115,006 kWh	374,814	2,603	8,202	101,379,158 kWh	364,965	2,535
Commercial/Small-Medium Industrial	Natural Gas	338	219,345 GJ	219,345	11,002	282	199,464 GJ	199,464	10,005
	Electricity	1,110	74,006,898 kWh	266,425	1,850	1,084	71,149,472 kWh	256,138	1,779
Totals		**11,739**		**1,346,972**	**37,852**	**11,867**		**1,282,022**	**35,230**

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	15,579 t	N/A	17,652	0	12,010 t	N/A	16,648
Totals		**0**			**17,652**	**0**			**16,648**

Memo Items

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

Port Alberni 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: 17,622)			2010 (Population: 17,752)		
	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	16,688 L	753	52	52,063 L	2,251	144
Gasoline	20,173,332 L	706,245	48,220	21,658,228 L	758,358	49,006
Diesel Fuel	4,217,929 L	161,549	11,374	4,696,591 L	179,881	12,280
Other Fuel	104,417 L	3,032	185	46,223 L	1,646	99
Wood	175,951 GJ	175,951	3,565	170,327 GJ	170,327	3,451
Heating Oil	146,839 GJ	146,839	10,351	142,146 GJ	142,146	9,721
Propane	25,321 GJ	25,321	1,545	24,511 GJ	24,511	1,495
Natural Gas	357,622 GJ	357,622	17,938	323,935 GJ	323,935	16,249
Electricity	178,121,904 kWh	641,239	4,453	172,528,630 kWh	621,103	4,314
Solid Waste	15,579 t	0	17,652	12,010 t	0	16,648
Grand Totals		**2,218,551**	**115,335**		**2,224,158**	**113,407**

Port Alberni 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	5,400	42	5,615	74	5,440	71
Semi-Detached House	205	2	205	3	185	2
Row House	300	2	350	5	390	5
Apartment, Duplex	360	3	140	2	240	3
Apartment, 5 storeys or higher	125	1	105	1	115	2
Apartment, under 5 storeys	820	6	965	13	1,110	15
Other Single Attached House	35	0	30	0	15	0
Movable Dwelling	115	1	155	2	155	2

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	5,455	79	5,160	81	5,360	77
Car, Truck,Van as Passenger	420	6	525	8	675	10
Public Transit	65	1	95	1	80	1
Walked	665	10	425	7	610	9
Bicycle	130	2	50	1	55	1
Motorcycle	15	0	45	1	15	0
Taxicab	30	0	30	0	0	0
Other Method	110	2	25	0	125	2

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	45	2
Agricultural Land Reserve	86	4
Other land use	1,874	93
Total Parks and Protected Area	45	2
Total Land Area	2,005	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	45	2
Agricultural Land Reserve	86	4
Other land use	1,874	93
Total Parks and Protected Area	45	2
Total Land Area	2,005	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	4,905	82
5 to 9.9 km	325	5
25 km or more	630	11
15 to 24.9 km	35	1
10 to 14.9 km	55	1

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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

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