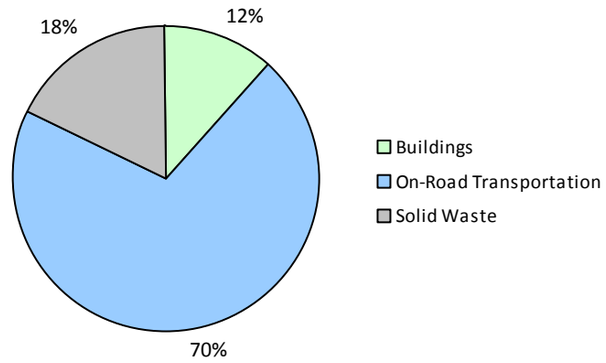
Alberni-Clayoquot Regional District Unincorporated Areas

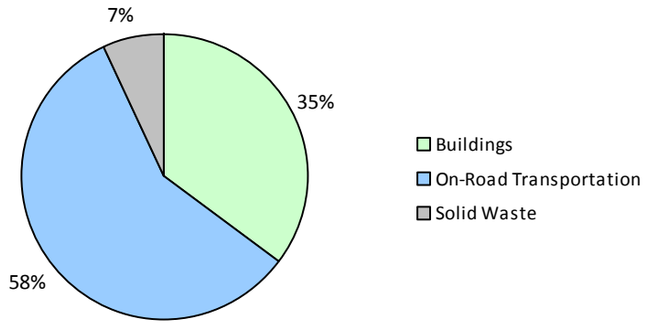
2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

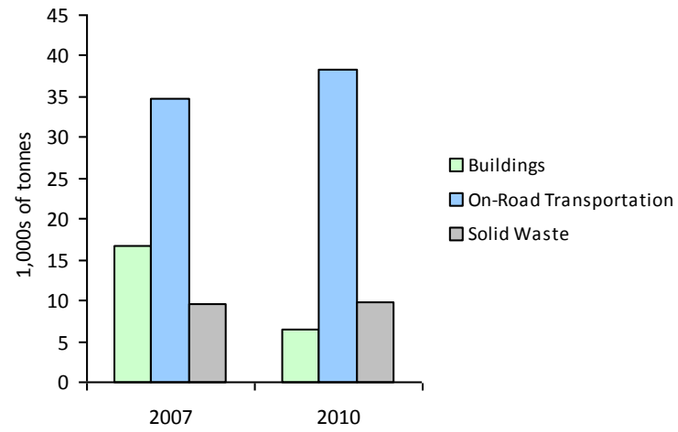
2010 GHG Emissions Sources (Total for this Community)



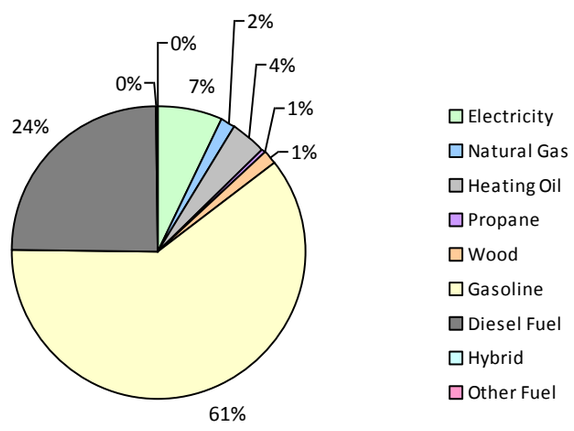
2010 GHG Emissions Sources (Total for BC)



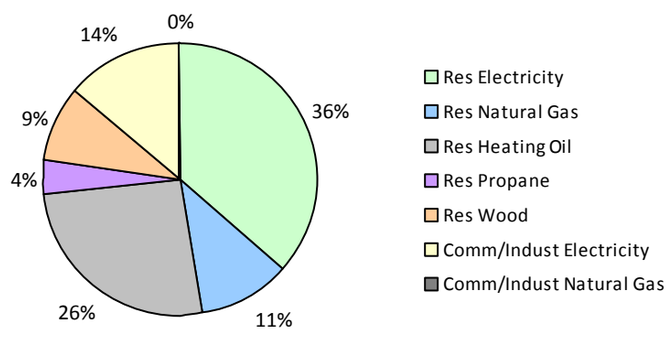
GHG Emissions Comparisons for this Community



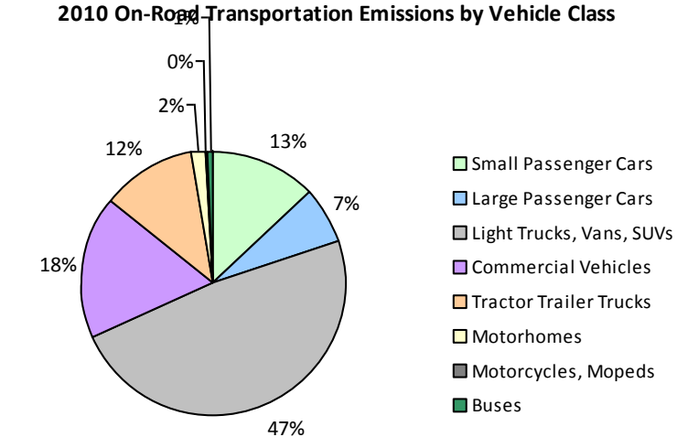
2010 Total Emissions by Fuel Type



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	1,445	1,970,035 L	14,600	68,952	4,696	1,445	2,058,863 L	15,200	72,060	4,630
	Diesel Fuel	72	123,246 L	24,600	4,720	336	77	128,652 L	24,400	4,928	340
Large Passenger Cars	Hybrid			23,000	179	13			23,700	370	24
	Gasoline	792	1,241,436 L	13,900	43,452	2,963	718	1,149,418 L	14,200	40,229	2,591
	Diesel Fuel	14	17,281 L	10,600	662	47	11	13,497 L	11,700	516	36
Light Trucks, Vans, SUVs	Hybrid								24,600	429	28
	Gasoline	2,921	6,496,538 L	15,800	227,378	15,598	3,245	7,637,250 L	16,500	267,304	17,349
	Diesel Fuel	249	486,302 L	11,000	18,625	1,323	178	376,607 L	12,200	14,423	995
	Other Fuel	36	65,583 L	11,100	1,660	101	17	26,801 L	10,200	677	41
Commercial Vehicles	Gasoline	319	851,444 L	16,600	29,802	2,000	366	994,180 L	16,700	34,795	2,223
	Diesel Fuel	407	1,259,223 L	17,300	48,228	3,388	490	1,753,683 L	19,800	67,165	4,580
	Other Fuel	13	27,394 L	11,700	693	43			11,700	233	14
Tractor Trailer Trucks	Diesel Fuel	101	1,300,214 L	35,700	49,799	3,499	117	1,707,712 L	37,800	65,405	4,458
Motorhomes	Gasoline	63	149,695 L	16,500	5,239	349	60	142,747 L	16,700	4,996	318
	Diesel Fuel	45	136,137 L	16,700	5,213	367	46	146,642 L	16,600	5,616	383
Motorcycles, Mopeds	Gasoline	115	24,141 L	4,700	846	57	123	30,689 L	5,600	1,072	70
Buses	Gasoline			18,400	619	42			17,100	1,051	68
	Diesel Fuel			18,200	266	18			18,200	1,951	134
Totals		**6,592**	**14,148,669 L**	**15,434**	**506,333**	**34,840**	**6,893**	**14,148,669 L**	**16,357**	**583,220**	**38,282**

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Wood	N/A	30,620 GJ	30,620	620	N/A	29,641 GJ	29,641	601
	Heating Oil	N/A	25,529 GJ	25,529	1,800	N/A	24,713 GJ	24,713	1,690
	Propane	N/A	4,399 GJ	4,399	268	N/A	4,258 GJ	4,258	260
	Natural Gas	2,035	121,946 GJ	121,946	6,117	286	13,922 GJ	13,922	698
	Electricity	5,818	98,630,065 kWh	355,068	2,466	5,940	95,253,167 kWh	342,911	2,381
Commercial/Small-Medium Industrial	Natural Gas	173	90,042 GJ	90,042	4,517	29	0 GJ	0	0
	Electricity	718	40,164,445 kWh	144,592	1,005	772	36,284,891 kWh	130,626	907
Totals		**8,744**		**772,196**	**16,793**	**7,027**		**546,071**	**6,537**

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	8,508 t	N/A	9,640	0	7,024 t	N/A	9,736
Totals		**0**			**9,640**	**0**			**9,736**

Totals for Transportation, Buildings and Solid Waste

Fuel Type	2007 (Population: 10,198)			2010 (Population: 10,383)		
	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	0 L	179	13	0 L	799	52
Gasoline	10,733,289 L	376,288	25,705	12,013,147 L	421,507	27,249
Diesel Fuel	3,322,403 L	127,513	8,978	4,126,793 L	160,004	10,926
Other Fuel	92,977 L	2,353	144	26,801 L	910	55
Wood	30,620 GJ	30,620	620	29,641 GJ	29,641	601
Heating Oil	25,529 GJ	25,529	1,800	24,713 GJ	24,713	1,690
Propane	4,399 GJ	4,399	268	4,258 GJ	4,258	260
Natural Gas	211,988 GJ	211,988	10,634	13,922 GJ	13,922	698
Electricity	138,794,510 kWh	499,660	3,471	131,538,058 kWh	473,537	3,288
Solid Waste	8,508 t	0	9,640	7,024 t	0	9,736
Grand Totals		**1,278,529**	**61,273**		**1,129,291**	**54,555**

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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	3,220	25	3,285	89	3,265	84
Semi-Detached House	60	0	45	1	55	1
Row House	30	0	35	1	55	1
Apartment, Duplex	10	0	35	1	30	1
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	85	1	25	1	65	2
Other Single Attached House	0	0	5	0	5	0
Movable Dwelling	430	3	275	7	400	10

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	3,335	80	2,885	77	3,135	77
Car, Truck,Van as Passenger	260	6	255	7	315	8
Public Transit	20	0	20	1	30	1
Walked	330	8	315	8	365	9
Bicycle	50	1	10	0	45	1
Motorcycle	5	0	25	1	0	0
Taxicab	0	0	0	0	0	0
Other Method	190	5	220	6	195	5

Parks and Protected Greenspace

Parks and protected greenspaces are important for the protection and enhancement of community carbon sinks.

	2009	
	Units	%
National Parks	22,290	3
Provincial Parks / Protected Areas	117,061	17
Local Parks	19	0
Agricultural Land Reserve	7,670	1
Other land use	533,713	78
Total Parks and Protected Area	139,368	20
Total Land Area	680,752	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	22,290	3
Provincial Parks / Protected Areas	117,061	17
Local Parks	19	0
Agricultural Land Reserve	7,670	1
Other land use	533,713	78
Total Parks and Protected Area	139,368	20
Total Land Area	680,752	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

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