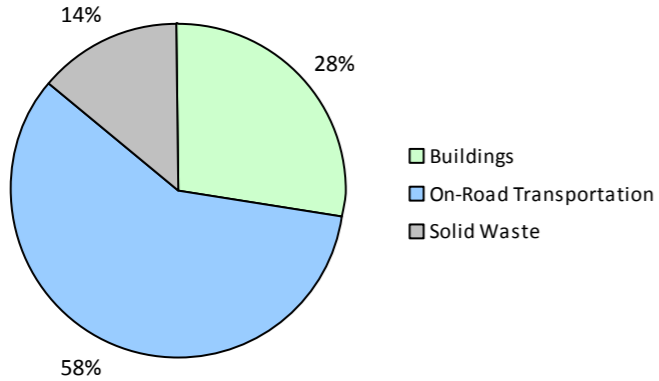
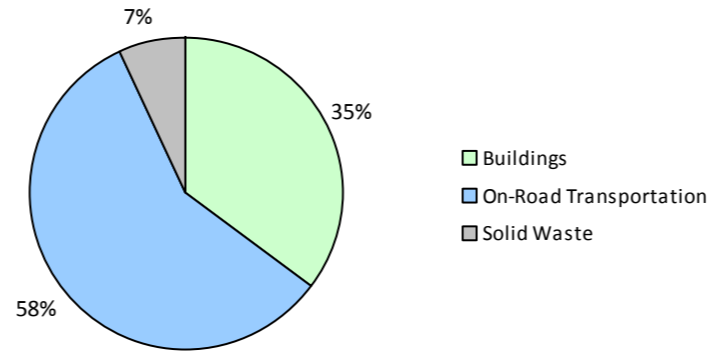


Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

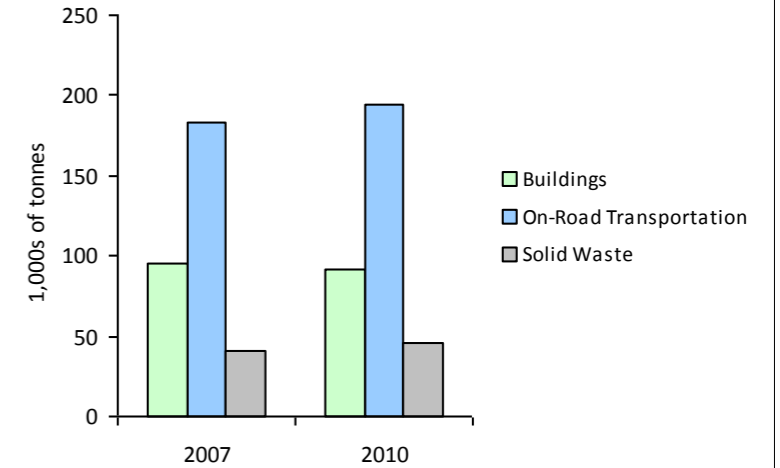
2010 GHG Emissions Sources (Total for this Community)



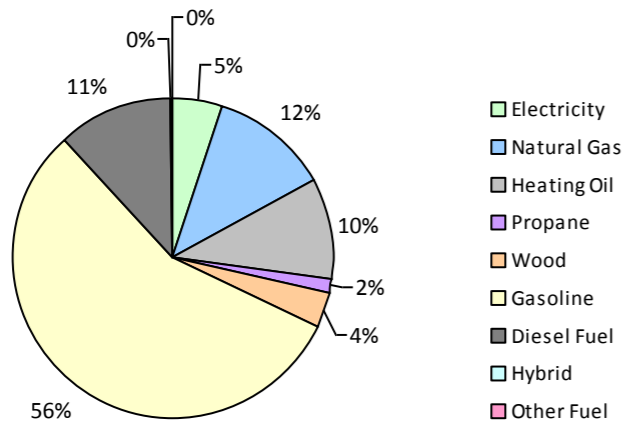
2010 GHG Emissions Sources (Total for BC)



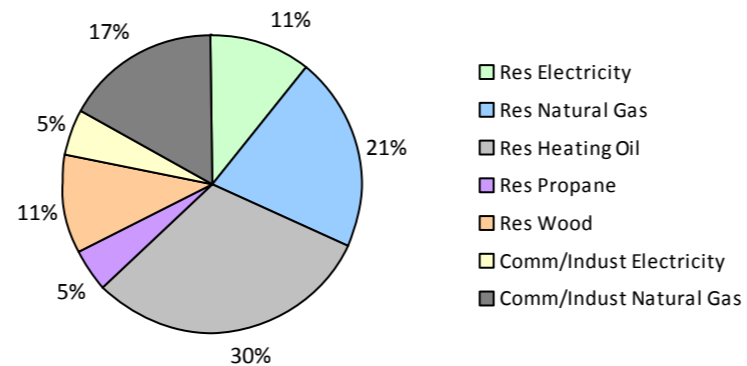
GHG Emissions Comparisons for this Community



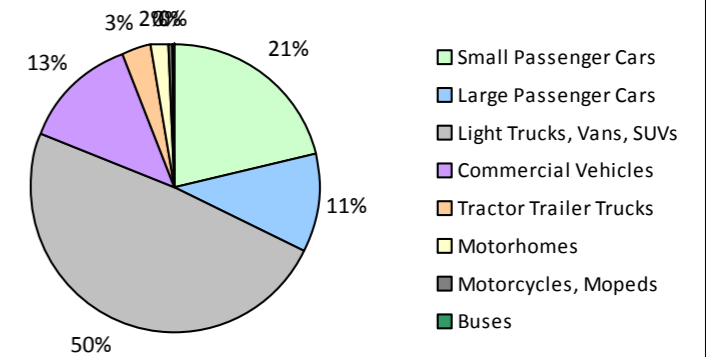
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



Comox Valley Regional District 2010 Community Energy and Emissions Inventory

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	20	15,014 L	16,400	526	35	43	39,498 L	18,200	1,382	87
	Gasoline	11,316	16,151,937 L	15,200	565,318	38,446	11,764	17,202,854 L	15,700	602,100	38,669
	Diesel Fuel	558	990,024 L	26,200	37,918	2,703	561	938,679 L	24,400	35,951	2,489
	Other Fuel			8,000	18	0			27,700	147	8
Large Passenger Cars	Hybrid	57	62,113 L	21,600	2,175	145	163	190,570 L	21,200	6,670	425
	Gasoline	5,369	9,017,596 L	14,800	315,615	21,485	5,251	8,984,397 L	15,200	314,453	20,204
	Diesel Fuel	89	122,841 L	14,900	4,705	335	135	157,502 L	12,700	6,032	417
	Other Fuel			12,600	207	13			12,100	126	8
Light Trucks, Vans, SUVs	Hybrid	13	22,543 L	22,000	789	53	39	77,947 L	23,400	2,728	175
	Gasoline	14,360	34,502,968 L	16,700	1,207,603	82,719	16,058	40,079,200 L	17,500	1,402,772	90,989
	Diesel Fuel	750	1,588,619 L	12,000	60,845	4,325	573	1,369,459 L	14,200	52,451	3,622
	Other Fuel	107	214,251 L	11,800	5,421	329	58	106,899 L	10,700	2,705	163
Commercial Vehicles	Gasoline	1,031	2,865,681 L	16,400	100,299	6,734	1,245	3,592,431 L	17,200	125,735	8,036
	Diesel Fuel	1,465	4,950,730 L	19,000	189,613	13,321	1,785	6,636,506 L	21,100	254,177	17,327
	Other Fuel	66	144,763 L	12,300	3,663	222	49	102,564 L	11,700	2,595	158
Tractor Trailer Trucks	Gasoline			16,000	342	23			16,300	160	10
	Diesel Fuel	220	2,945,301 L	31,900	112,805	7,926	193	2,430,812 L	30,900	93,101	6,347
	Other Fuel			11,300	71	4			10,200	64	4
Motorhomes	Gasoline	391	908,933 L	16,400	31,812	2,123	407	950,615 L	16,600	33,271	2,115
	Diesel Fuel	195	592,133 L	16,700	22,678	1,593	190	597,478 L	16,600	22,884	1,559
	Other Fuel			17,200	523	31			16,500	323	20
Motorcycles, Mopeds	Gasoline	967	225,800 L	5,300	7,903	527	1,143	305,713 L	6,000	10,700	678
Buses	Gasoline	23	63,333 L	17,500	2,217	148	27	69,471 L	16,700	2,431	155
	Diesel Fuel	10	50,384 L	21,100	1,930	136	27	129,738 L	19,900	4,969	339
	Other Fuel			12,500	133	9			10,400	108	6
Totals		37,007	75,434,964 L	15,870	2,675,129	183,385	39,711	75,434,964 L	16,575	2,978,035	194,010

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Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Wood	N/A	510,736 GJ	510,736	10,348	N/A	494,412 GJ	494,412	10,017
	Heating Oil	N/A	426,242 GJ	426,242	30,046	N/A	412,618 GJ	412,618	28,219
	Propane	N/A	73,502 GJ	73,502	4,484	N/A	71,153 GJ	71,153	4,341
	Natural Gas	8,332	397,986 GJ	397,986	19,963	9,064	379,654 GJ	379,654	19,044
	Electricity	28,979	412,912,297 kWh	1,486,483	10,323	30,247	411,987,100 kWh	1,483,152	10,300
Commercial/Small-Medium Industrial	Natural Gas	824	298,097 GJ	298,097	14,952	802	309,409 GJ	309,409	15,520
	Electricity	3,298	183,091,818 kWh	659,130	4,577	3,429	184,580,940 kWh	664,491	4,615
Totals		41,433		3,852,176	94,693	43,542		3,814,889	92,056

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	40,365 t	N/A	41,442	0	44,224 t	N/A	45,724
Totals		0			41,442	0			45,724

Memo Items

Agriculture		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Enteric Fermentation	Methane	9,649	507 t	0	10,647				
Totals		9,649			10,647	0			

Land-use Change - Deforestation		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Agriculture	Deforestation	9	0 ha	0	6,301				
Settlement	Deforestation	36	0 ha	0	32,101				
Totals		45			38,402	0			

Comox Valley Regional District 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: 62,042)			2010 (Population: 64,642)		
	Consumption	Energy (GJ)	CO2e (t)	Consumption	Energy (GJ)	CO2e (t)
Hybrid	99,670 L	3,490	233	308,015 L	10,780	687
Gasoline	63,736,248 L	2,231,109	152,205	71,184,681 L	2,491,622	160,856
Diesel Fuel	11,240,032 L	430,494	30,339	12,260,174 L	469,565	32,100
Other Fuel	359,014 L	10,036	608	209,463 L	6,068	367
Wood	510,736 GJ	510,736	10,348	494,412 GJ	494,412	10,017
Heating Oil	426,242 GJ	426,242	30,046	412,618 GJ	412,618	28,219
Propane	73,502 GJ	73,502	4,484	71,153 GJ	71,153	4,341
Natural Gas	696,083 GJ	696,083	34,915	689,063 GJ	689,063	34,564
Electricity	596,004,115 kWh	2,145,613	14,900	596,568,040 kWh	2,147,643	14,915
Solid Waste	40,365 t	0	41,442	44,224 t	0	45,724
Grand Totals		6,527,305	319,520		6,792,924	331,790

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	19,405	77	16,630	73	17,585	70
Semi-Detached House	1,330	5	1,685	7	2,095	8
Row House	825	3	1,135	5	1,305	5
Apartment, Duplex	450	2	185	1	420	2
Apartment, 5 storeys or higher	0	0	10	0	10	0
Apartment, under 5 storeys	2,190	9	2,290	10	2,815	11
Other Single Attached House	65	0	90	0	20	0
Movable Dwelling	970	4	855	4	1,015	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	19,550	77	16,890	79	18,755	78
Car, Truck, Van as Passenger	2,045	8	1,440	7	1,720	7
Public Transit	325	1	170	1	380	2
Walked	1,660	7	1,440	7	1,645	7
Bicycle	775	3	770	4	910	4
Motorcycle	65	0	65	0	170	1
Taxicab	10	0	0	0	15	0
Other Method	850	3	535	3	490	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	14,002	8
Local Parks	1,219	1
Agricultural Land Reserve	23,057	13
Other land use	136,231	78
Total Parks and Protected Area	15,213	9
Total Land Area	174,510	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	14,002	8
Local Parks	1,219	1
Agricultural Land Reserve	23,057	13
Other land use	136,231	78
Total Parks and Protected Area	15,213	9
Total Land Area	174,510	100

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

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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,