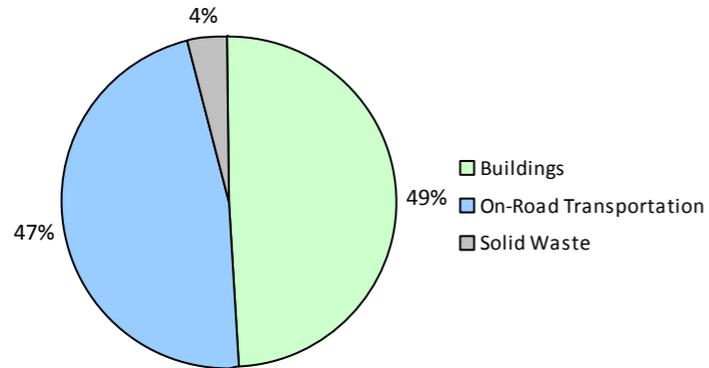
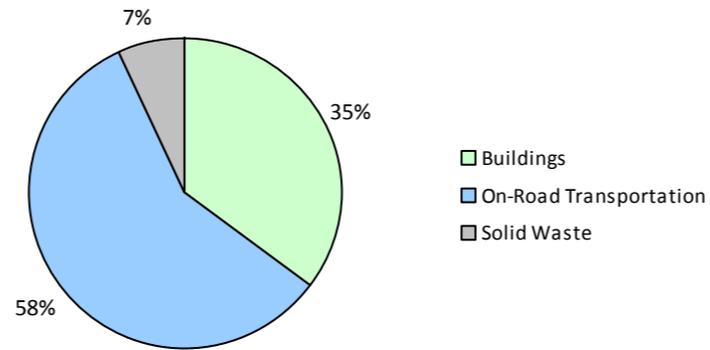


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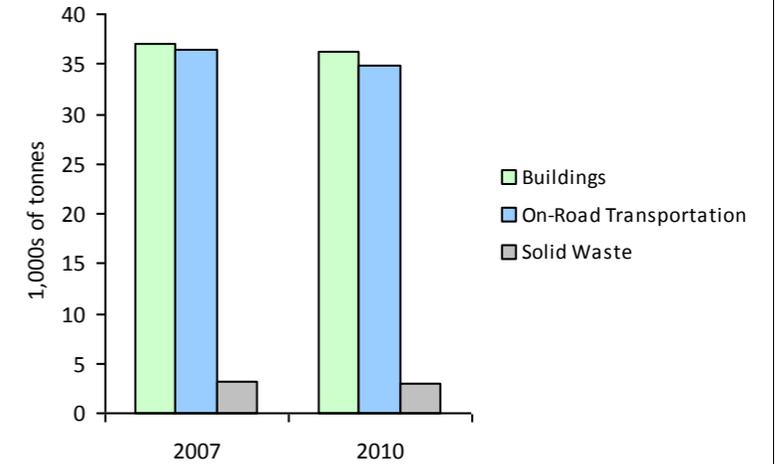
2010 GHG Emissions Sources (Total for this Community)



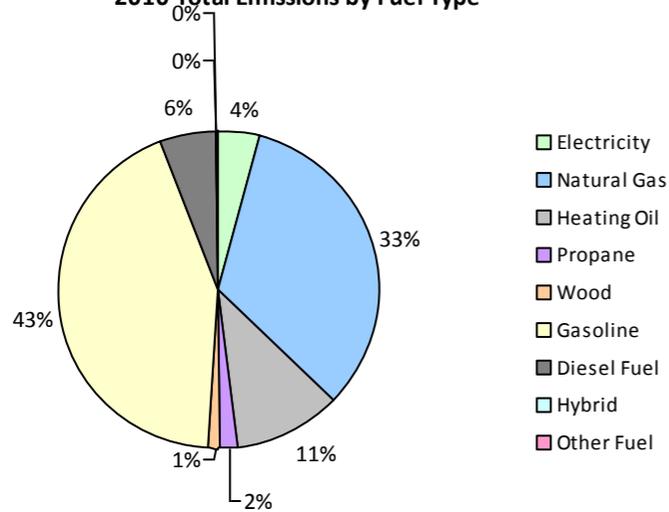
2010 GHG Emissions Sources (Total for BC)



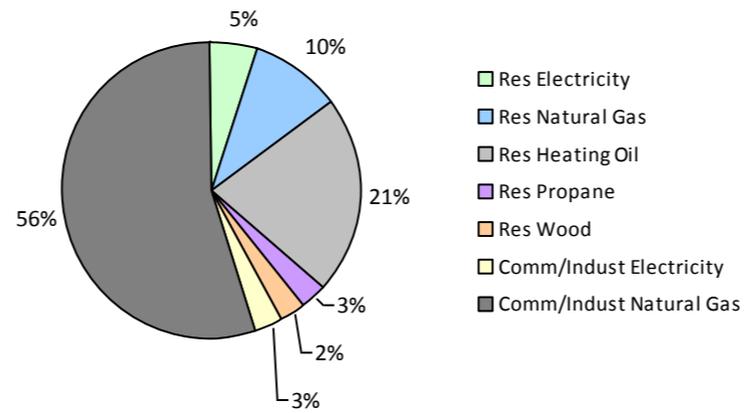
GHG Emissions Comparisons for this Community



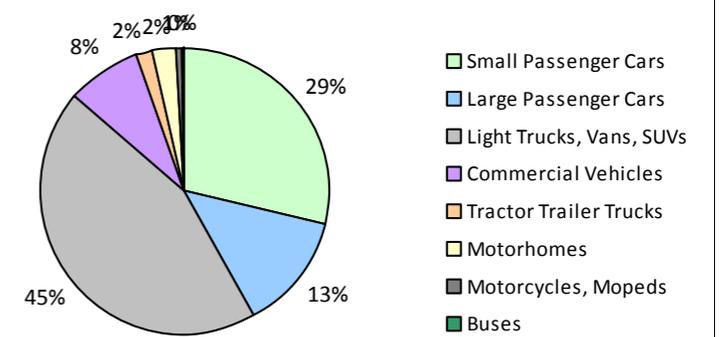
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



Esquimalt District Municipality 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			15,100	149	10	15	9,959 L	13,200	349	22
	Gasoline	4,079	4,402,409 L	11,400	154,084	10,516	4,062	4,383,213 L	11,400	153,413	9,879
	Diesel Fuel	87	78,700 L	13,900	3,015	215	85	75,798 L	13,600	2,903	200
	Other Fuel			7,300	18	0			10,100	50	4
Large Passenger Cars	Hybrid	12	17,934 L	28,900	627	42	31	32,384 L	18,900	1,134	72
	Gasoline	1,531	2,035,307 L	11,500	71,236	4,880	1,469	1,957,239 L	11,600	68,503	4,423
	Diesel Fuel	28	27,255 L	9,900	1,044	74	26	23,445 L	9,400	898	62
	Other Fuel	10	25,534 L	16,200	646	39			9,500	64	3
Light Trucks, Vans, SUVs	Hybrid			15,700	124	8			15,300	341	22
	Gasoline	3,253	6,023,424 L	13,200	210,820	14,447	3,537	6,412,141 L	13,000	224,425	14,578
	Diesel Fuel	200	411,206 L	11,900	15,749	1,118	142	318,149 L	13,200	12,185	840
	Other Fuel	39	65,267 L	10,000	1,652	100	29	45,860 L	9,400	1,160	69
Commercial Vehicles	Gasoline	200	462,620 L	13,800	16,191	1,087	220	494,192 L	13,500	17,297	1,105
	Diesel Fuel	190	670,520 L	18,500	25,681	1,805	185	685,509 L	19,500	26,256	1,790
	Other Fuel			9,500	355	21			9,600	399	24
Tractor Trailer Trucks	Diesel Fuel	37	333,346 L	22,200	12,767	897	27	270,491 L	25,000	10,359	706
Motorhomes	Gasoline	101	223,779 L	16,300	7,832	522	90	200,037 L	16,200	7,002	444
	Diesel Fuel	56	155,704 L	16,200	5,964	419	53	149,461 L	16,300	5,724	391
Motorcycles, Mopeds	Gasoline	346	79,686 L	5,400	2,789	186	427	111,303 L	6,100	3,895	247
Buses	Gasoline			17,000	620	41			15,000	494	32
	Diesel Fuel			12,600	130	8			15,100	441	30
	Other Fuel			11,200	56	4					
Totals		10,169	15,012,691 L	12,128	531,549	36,439	10,398	15,012,691 L	12,102	537,292	34,943

Esquimalt District Municipality 2010 Community Energy and Emissions Inventory

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	44,358 GJ	44,358	899	N/A	42,940 GJ	42,940	870
	Heating Oil	N/A	116,338 GJ	116,338	8,201	N/A	112,619 GJ	112,619	7,702
	Propane	N/A	20,190 GJ	20,190	1,232	N/A	19,545 GJ	19,545	1,192
	Natural Gas	1,303	71,565 GJ	71,565	3,590	1,409	69,975 GJ	69,975	3,510
	Electricity	7,977	78,905,978 kWh	284,061	1,973	8,163	76,503,788 kWh	275,413	1,913
Commercial/Small-Medium Industrial	Natural Gas	314	400,250 GJ	400,250	20,077	293	396,592 GJ	396,592	19,893
	Electricity	620	45,960,774 kWh	165,459	1,149	650	44,753,429 kWh	161,112	1,119
Totals		10,214		1,102,221	37,121	10,515		1,078,196	36,199

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Community Solid Waste	Solid Waste	0	4,834 t	N/A	3,234	0	3,267 t	N/A	2,892
Totals		0			3,234	0			2,892

Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	1		0	0	1		0	0
Totals		1			0	1			0

Esquimalt District Municipality 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: 17,527)			2010 (Population: 17,689)		
	Consumption	Energy (GJ)	CO2e (t)	Consumption	Energy (GJ)	CO2e (t)
Hybrid	17,934 L	900	60	42,343 L	1,824	116
Gasoline	13,227,225 L	463,572	31,679	13,558,125 L	475,029	30,708
Diesel Fuel	1,676,731 L	64,350	4,536	1,522,853 L	58,766	4,019
Other Fuel	90,801 L	2,727	164	45,860 L	1,673	100
Wood	44,358 GJ	44,358	899	42,940 GJ	42,940	870
Heating Oil	116,338 GJ	116,338	8,201	112,619 GJ	112,619	7,702
Propane	20,190 GJ	20,190	1,232	19,545 GJ	19,545	1,192
Natural Gas	471,815 GJ	471,815	23,667	466,567 GJ	466,567	23,403
Electricity	124,866,752 kWh	449,520	3,122	121,257,217 kWh	436,525	3,032
Solid Waste	4,834 t	0	3,234	3,267 t	0	2,892
Grand Totals		1,633,770	76,794		1,615,488	74,034

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	2,255	23	2,355	31	1,960	24
Semi-Detached House	675	7	675	9	655	8
Row House	435	5	355	5	345	4
Apartment, Duplex	525	5	490	6	820	10
Apartment, 5 storeys or higher	255	3	195	3	420	5
Apartment, under 5 storeys	3,060	32	3,395	45	3,805	47
Other Single Attached House	35	0	15	0	10	0
Movable Dwelling	105	1	80	1	0	0

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	4,205	57	4,445	58	4,700	54
Car, Truck, Van as Passenger	640	9	580	8	665	8
Public Transit	1,080	15	1,115	14	1,410	16
Walked	855	12	1,015	13	1,200	14
Bicycle	365	5	430	6	465	5
Motorcycle	45	1	40	1	95	1
Taxicab	20	0	15	0	25	0
Other Method	125	2	85	1	95	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	44	6
Agricultural Land Reserve	61	9
Other land use	605	85
Total Parks and Protected Area	44	6
Total Land Area	710	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	44	6
Agricultural Land Reserve	61	9
Other land use	605	85
Total Parks and Protected Area	44	6
Total Land Area	710	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	5,435	74
5 to 9.9 km	1,385	19
25 km or more	170	2
15 to 24.9 km	190	3
10 to 14.9 km	190	3

Esquimalt District Municipality
2010 Community Energy and Emissions Inventory
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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,