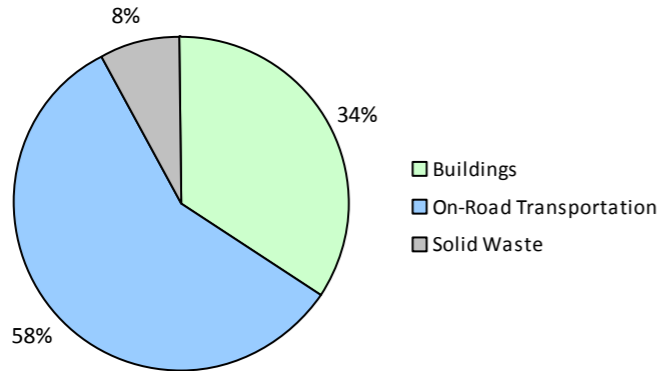


Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

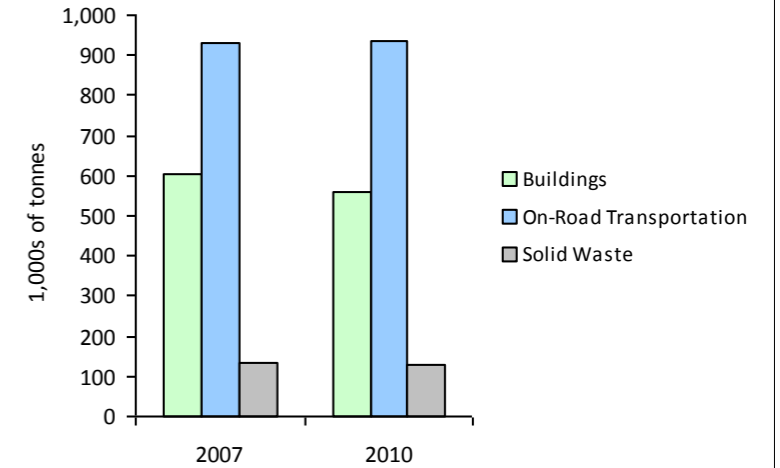
2010 GHG Emissions Sources (Total for this Community)



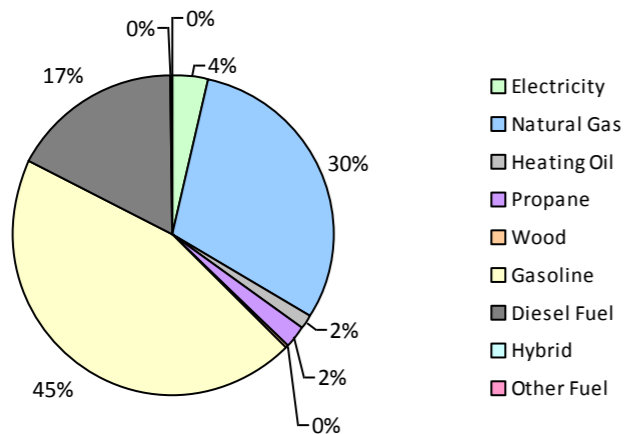
2010 GHG Emissions Sources (Total for BC)



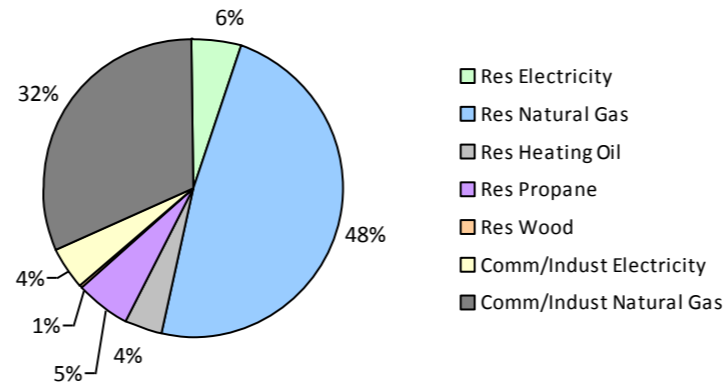
GHG Emissions Comparisons for this Community



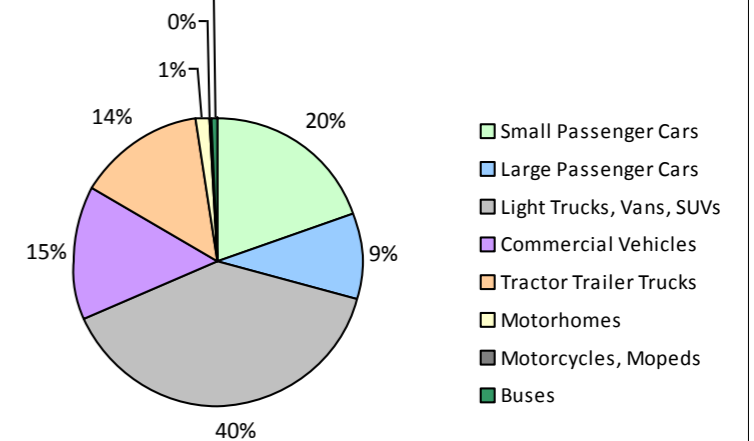
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



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	53	47,970 L	19,500	1,680	113	95	88,528 L	18,700	3,099	197
	Gasoline	51,561	79,139,855 L	16,300	2,769,895	187,847	52,534	79,311,815 L	16,100	2,775,914	177,972
	Diesel Fuel	1,714	2,732,512 L	23,500	104,654	7,463	1,727	2,654,254 L	22,600	101,658	7,038
	Other Fuel			20,500	175	11			16,000	254	16
Large Passenger Cars	Hybrid	101	108,009 L	20,000	3,780	253	368	431,693 L	20,500	15,109	962
	Gasoline	23,995	40,413,199 L	14,800	1,414,461	95,903	23,133	38,784,648 L	14,800	1,357,462	87,012
	Diesel Fuel	278	323,952 L	12,100	12,408	883	257	285,864 L	11,900	10,949	757
	Other Fuel	20	30,909 L	12,100	783	49			11,600	229	15
Light Trucks, Vans, SUVs	Hybrid	50	79,907 L	20,700	2,796	188	142	255,002 L	20,500	8,925	574
	Gasoline	59,170	145,115,461 L	17,200	5,079,040	346,477	64,931	156,902,156 L	17,000	5,491,576	355,275
	Diesel Fuel	1,592	3,901,956 L	14,400	149,445	10,634	1,311	3,662,856 L	17,400	140,288	9,700
	Other Fuel	239	480,763 L	12,100	12,164	737	113	201,059 L	10,700	5,087	308
Commercial Vehicles	Hybrid								21,000	597	38
	Gasoline	7,619	19,501,973 L	15,500	682,569	45,790	7,722	19,801,702 L	15,500	693,060	44,278
	Diesel Fuel	7,693	27,607,101 L	19,400	1,057,352	74,288	9,195	37,012,389 L	22,100	1,417,574	96,636
	Other Fuel	326	701,317 L	11,800	17,743	1,075	206	428,794 L	11,500	10,849	657
Tractor Trailer Trucks	Gasoline	25	105,066 L	13,800	3,678	246	21	111,958 L	16,600	3,919	250
	Diesel Fuel	2,658	51,252,305 L	46,500	1,962,964	137,918	2,649	51,911,921 L	47,600	1,988,228	135,540
	Other Fuel			11,200	465	28			8,700	174	10
Motorhomes	Gasoline	1,339	3,351,285 L	17,500	117,295	7,838	1,342	3,382,364 L	17,500	118,383	7,536
	Diesel Fuel	734	2,395,730 L	17,200	91,756	6,446	662	2,249,868 L	17,100	86,170	5,873
	Other Fuel	27	69,780 L	17,200	1,765	107	23	62,793 L	17,500	1,589	96
Motorcycles, Mopeds	Gasoline	3,008	723,763 L	5,300	25,331	1,690	3,455	962,943 L	6,100	33,703	2,138
Buses	Gasoline	297	842,562 L	17,900	29,490	1,981	288	740,307 L	16,300	25,910	1,657
	Diesel Fuel	216	1,054,114 L	18,800	40,372	2,837	270	1,266,218 L	19,200	48,496	3,306
	Other Fuel	37	93,720 L	12,700	2,370	144	24	54,545 L	11,100	1,380	83
Totals		162,752	380,073,209 L	16,863	13,584,431	930,946	170,468	380,073,209 L	16,944	14,340,582	937,924

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	216,625 GJ	216,625	4,389	N/A	201,789 GJ	201,789	4,088
	Heating Oil	N/A	363,256 GJ	363,256	25,606	N/A	338,376 GJ	338,376	23,142
	Propane	N/A	537,149 GJ	537,149	32,771	N/A	500,360 GJ	500,360	30,527
	Natural Gas	67,307	5,843,993 GJ	5,843,993	293,135	68,845	5,307,322 GJ	5,307,322	266,216
	Electricity	97,348	1,223,907,058 kWh	4,406,062	30,599	102,366	1,252,417,474 kWh	4,508,699	31,312
Commercial/Small-Medium Industrial	Natural Gas	6,896	3,879,184 GJ	3,879,184	194,578	6,824	3,588,576 GJ	3,588,576	180,003
	Electricity	12,218	990,550,041 kWh	3,565,977	24,765	12,898	995,467,570 kWh	3,583,680	24,888
Totals		183,769		18,812,246	605,843	190,933		18,028,802	560,176

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	145,987 t	N/A	135,181	0	99,880 t	N/A	127,798
Totals		0			135,181	0			127,798

Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Large Industrial	Natural Gas	103	2,148,456 GJ	2,148,456	107,767	87	2,181,536 GJ	2,181,536	109,426
	Electricity	6	66,154,229 kWh	238,155	1,654	7	81,503,162 kWh	293,411	2,038
Totals		109		2,386,611	109,421	94		2,474,947	111,464

Agriculture		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Enteric Fermentation	Methane	199,766	8,419 t	0	176,799				
Totals		199,766			176,799	0			

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

Land-use Change - Deforestation	2007				2010			
	Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Agriculture Deforestation	35	0 ha	0	16,099				
Settlement Deforestation	133	0 ha	0	63,936				
Totals	168			80,035	0			

Totals for Transportation, Buildings and Solid Waste

Fuel Type	2007 (Population: 271,262)			2010 (Population: 284,995)		
	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	235,886 L	8,256	554	775,223 L	27,730	1,771
Gasoline	289,193,164 L	10,121,759	687,772	299,997,893 L	10,499,927	676,118
Diesel Fuel	89,267,670 L	3,418,951	240,469	99,043,370 L	3,793,363	258,850
Other Fuel	1,376,489 L	35,465	2,151	747,191 L	19,562	1,185
Wood	216,625 GJ	216,625	4,389	201,789 GJ	201,789	4,088
Heating Oil	363,256 GJ	363,256	25,606	338,376 GJ	338,376	23,142
Propane	537,149 GJ	537,149	32,771	500,360 GJ	500,360	30,527
Natural Gas	9,723,177 GJ	9,723,177	487,713	8,895,898 GJ	8,895,898	446,219
Electricity	2,214,457,099 kWh	7,972,039	55,364	2,247,885,044 kWh	8,092,379	56,200
Solid Waste	145,987 t	0	135,181	99,880 t	0	127,798
Grand Totals		32,396,677	1,671,970		32,369,384	1,625,898

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	49,830	39	53,420	62	53,460	56
Semi-Detached House	1,745	1	2,085	2	2,785	3
Row House	5,790	5	6,330	7	7,345	8
Apartment, Duplex	4,145	3	5,185	6	10,230	11
Apartment, 5 storeys or higher	1,175	1	1,115	1	1,375	1
Apartment, under 5 storeys	14,125	11	15,855	18	16,950	18
Other Single Attached House	145	0	155	0	140	0
Movable Dwelling	2,015	2	1,935	2	2,345	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	71,180	83	81,015	84	93,815	83
Car, Truck, Van as Passenger	7,000	8	7,750	8	10,915	10
Public Transit	945	1	1,330	1	1,735	2
Walked	4,080	5	4,130	4	4,490	4
Bicycle	1,420	2	1,115	1	1,015	1
Motorcycle	180	0	85	0	230	0
Taxicab	75	0	55	0	125	0
Other Method	785	1	745	1	910	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	294,821	22
Local Parks	3,082	0
Agricultural Land Reserve	71,970	5
Other land use	989,119	73
Total Parks and Protected Area	297,904	22
Total Land Area	1,358,993	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	294,821	22
Local Parks	3,082	0
Agricultural Land Reserve	71,970	5
Other land use	989,119	73
Total Parks and Protected Area	297,904	22
Total Land Area	1,358,993	100

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

Fraser Valley Regional District
2010 Community Energy and Emissions Inventory
Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

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Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

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,