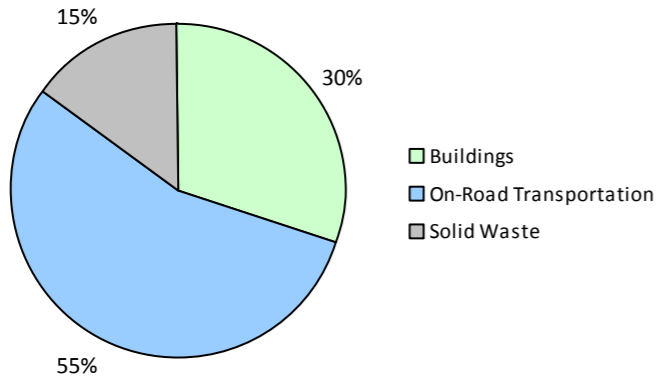


Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

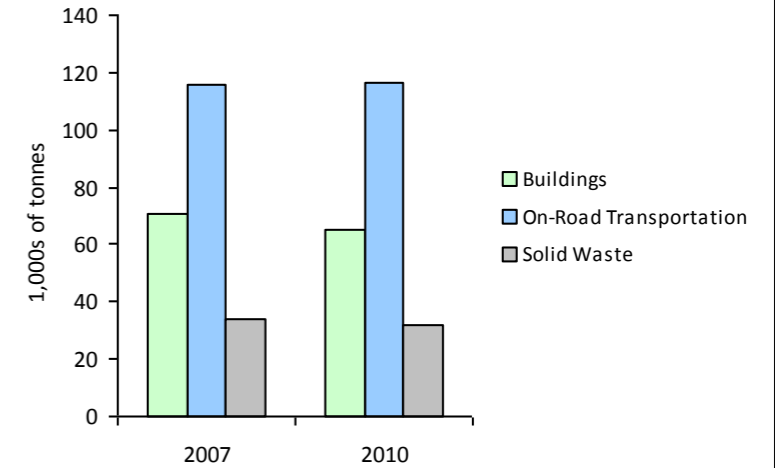
2010 GHG Emissions Sources (Total for this Community)



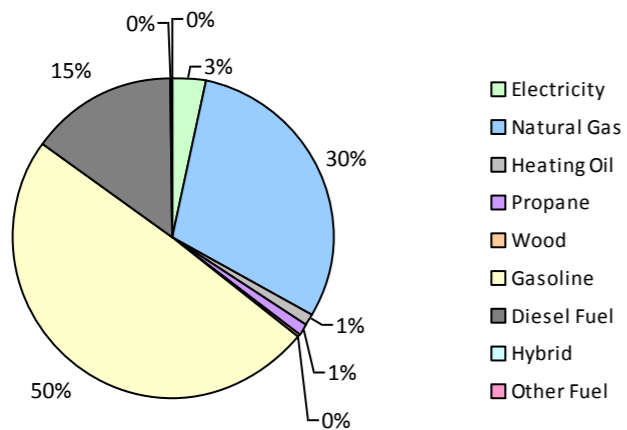
2010 GHG Emissions Sources (Total for BC)



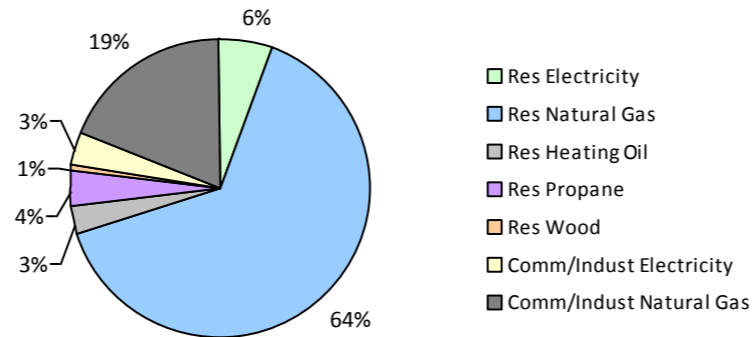
GHG Emissions Comparisons for this Community



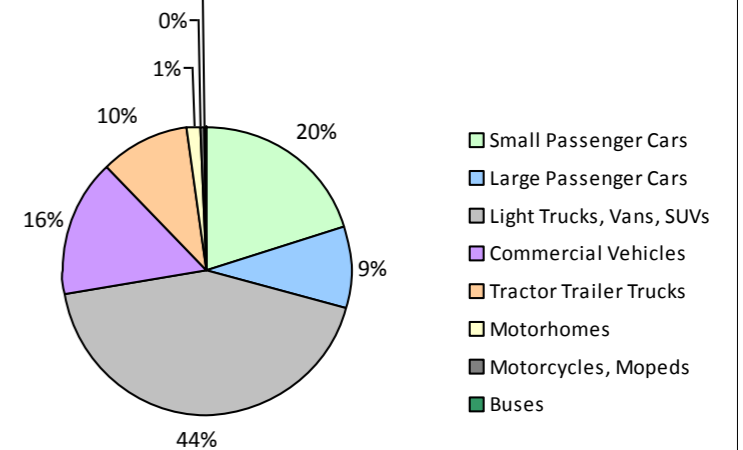
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



Mission District Municipality 2010 Community Energy and Emissions Inventory

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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			18,700	185	12	11	12,080 L	20,700	423	26
	Gasoline	6,693	10,190,047 L	16,200	356,651	24,216	6,768	10,123,789 L	16,000	354,332	22,740
	Diesel Fuel	206	322,945 L	23,100	12,369	881	222	350,030 L	23,100	13,406	928
Large Passenger Cars	Hybrid	14	14,666 L	19,400	513	34	38	41,663 L	19,400	1,458	93
	Gasoline	2,800	4,641,778 L	14,500	162,463	11,033	2,709	4,516,009 L	14,700	158,060	10,139
	Diesel Fuel	42	48,938 L	12,100	1,874	134	37	39,721 L	11,600	1,521	106
	Other Fuel			10,400	104	7			5,200	16	1
Light Trucks, Vans, SUVs	Hybrid			19,900	216	16	15	25,735 L	20,100	901	58
	Gasoline	8,331	20,115,714 L	16,900	704,050	48,060	9,042	21,566,248 L	16,800	754,818	48,844
	Diesel Fuel	203	498,564 L	14,500	19,094	1,359	169	482,837 L	17,700	18,492	1,279
	Other Fuel	30	60,828 L	12,200	1,539	93			10,700	412	25
Commercial Vehicles	Gasoline	1,097	2,644,150 L	14,600	92,545	6,206	1,136	2,742,644 L	14,600	95,992	6,132
	Diesel Fuel	958	3,280,341 L	18,600	125,637	8,827	1,211	4,565,883 L	20,800	174,873	11,921
	Other Fuel	56	119,027 L	11,600	3,012	182	31	64,327 L	11,300	1,628	98
Tractor Trailer Trucks	Gasoline			24,300	274	18			17,400	199	12
	Diesel Fuel	225	4,668,627 L	49,900	178,808	12,563	202	4,580,905 L	54,900	175,450	11,961
Motorhomes	Gasoline	138	345,387 L	17,300	12,088	808	154	382,267 L	17,100	13,379	850
	Diesel Fuel	87	276,146 L	17,300	10,576	743	68	223,982 L	17,100	8,578	585
	Other Fuel			18,800	222	13			18,400	219	13
Motorcycles, Mopeds	Gasoline	506	120,170 L	5,200	4,206	280	550	149,414 L	6,000	5,229	333
Buses	Gasoline	12	32,763 L	17,000	1,147	77	12	29,604 L	15,800	1,036	66
	Diesel Fuel	24	125,467 L	21,200	4,804	339	25	118,085 L	20,100	4,523	309
Totals		21,422	47,505,558 L	16,414	1,692,377	115,901	22,400	47,505,558 L	16,555	1,784,945	116,519

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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	18,707 GJ	18,707	379	N/A	17,425 GJ	17,425	353
	Heating Oil	N/A	31,367 GJ	31,367	2,211	N/A	29,219 GJ	29,219	1,998
	Propane	N/A	46,380 GJ	46,380	2,830	N/A	43,204 GJ	43,204	2,636
	Natural Gas	10,129	905,534 GJ	905,534	45,422	10,320	824,251 GJ	824,251	41,344
	Electricity	12,196	168,417,806 kWh	606,304	4,211	12,508	154,063,020 kWh	554,626	3,852
Commercial/Small-Medium Industrial	Natural Gas	680	270,501 GJ	270,501	13,568	672	248,001 GJ	248,001	12,440
	Electricity	1,316	89,961,451 kWh	323,861	2,249	1,425	90,808,574 kWh	326,911	2,270
Totals		24,321		2,202,654	70,870	24,925		2,043,637	64,893

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Community Solid Waste	Solid Waste	0	18,266 t	N/A	34,063	0	12,718 t	N/A	31,970
Totals		0			34,063	0			31,970

Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Large Industrial	Natural Gas	7	79,878 GJ	79,878	4,007	5	72,770 GJ	72,770	3,650
	Electricity	1		0	0				
Totals		8		79,878	4,007	5		72,770	3,650

Mission District Municipality
2010 Community Energy and Emissions Inventory

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Totals for Transportation, Buildings and Solid Waste

Fuel Type	2007 (Population: 36,280)			2010 (Population: 37,574)		
	Consumption	Energy (GJ)	CO2e (t)	Consumption	Energy (GJ)	CO2e (t)
Hybrid	14,666 L	914	62	79,478 L	2,782	177
Gasoline	38,090,009 L	1,333,424	90,698	39,509,975 L	1,383,045	89,116
Diesel Fuel	9,221,028 L	353,162	24,846	10,361,443 L	396,843	27,089
Other Fuel	179,855 L	4,877	295	64,327 L	2,275	137
Wood	18,707 GJ	18,707	379	17,425 GJ	17,425	353
Heating Oil	31,367 GJ	31,367	2,211	29,219 GJ	29,219	1,998
Propane	46,380 GJ	46,380	2,830	43,204 GJ	43,204	2,636
Natural Gas	1,176,035 GJ	1,176,035	58,990	1,072,252 GJ	1,072,252	53,784
Electricity	258,379,257 kWh	930,165	6,460	244,871,594 kWh	881,537	6,122
Solid Waste	18,266 t	0	34,063	12,718 t	0	31,970
Grand Totals		3,895,031	220,834		3,828,582	213,382

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	7,430	43	7,935	74	8,480	70
Semi-Detached House	180	1	210	2	290	2
Row House	595	3	470	4	480	4
Apartment, Duplex	635	4	925	9	1,635	13
Apartment, 5 storeys or higher	100	1	105	1	70	1
Apartment, under 5 storeys	765	4	965	9	1,130	9
Other Single Attached House	10	0	20	0	30	0
Movable Dwelling	335	2	80	1	65	1

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	10,005	84	11,115	85	13,630	85
Car, Truck, Van as Passenger	910	8	935	7	1,220	8
Public Transit	255	2	415	3	490	3
Walked	480	4	405	3	405	3
Bicycle	95	1	65	1	40	0
Motorcycle	15	0	15	0	55	0
Taxicab	15	0	15	0	0	0
Other Method	105	1	70	1	165	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	231	1
Local Parks	84	0
Agricultural Land Reserve	1,532	6
Other land use	23,850	93
Total Parks and Protected Area	315	1
Total Land Area	25,697	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	231	1
Local Parks	84	0
Agricultural Land Reserve	1,532	6
Other land use	23,850	93
Total Parks and Protected Area	315	1
Total Land Area	25,697	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	4,055	32
5 to 9.9 km	915	7
25 km or more	3,615	28
15 to 24.9 km	1,530	12
10 to 14.9 km	2,695	21

Mission District Municipality
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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,