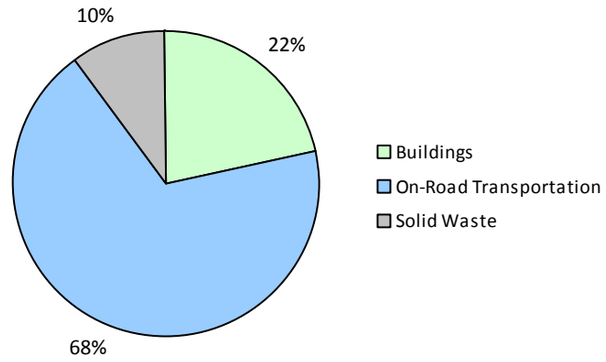
Montrose Village

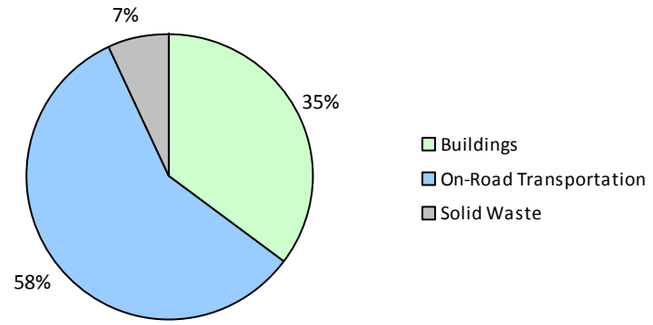
2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

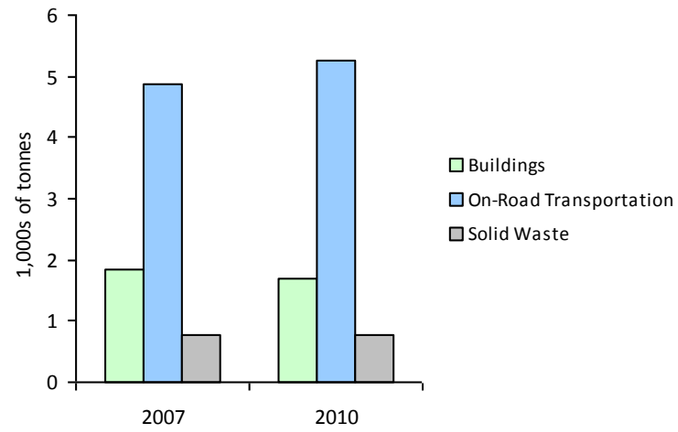
2010 GHG Emissions Sources (Total for this Community)



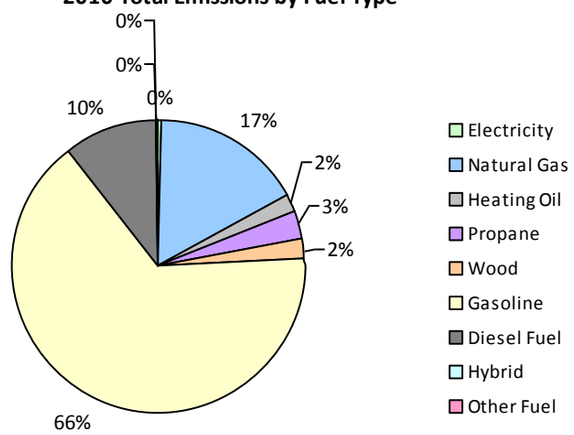
2010 GHG Emissions Sources (Total for BC)



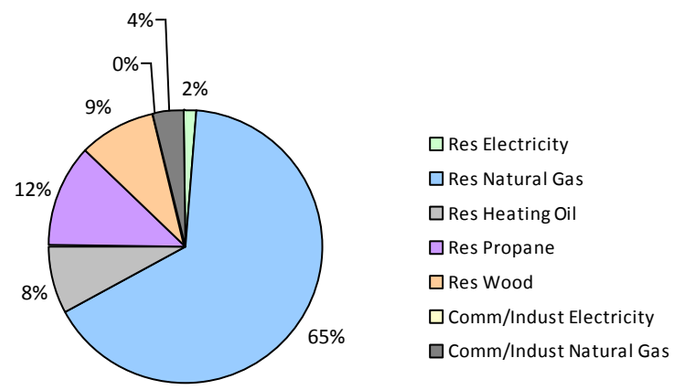
GHG Emissions Comparisons for this Community



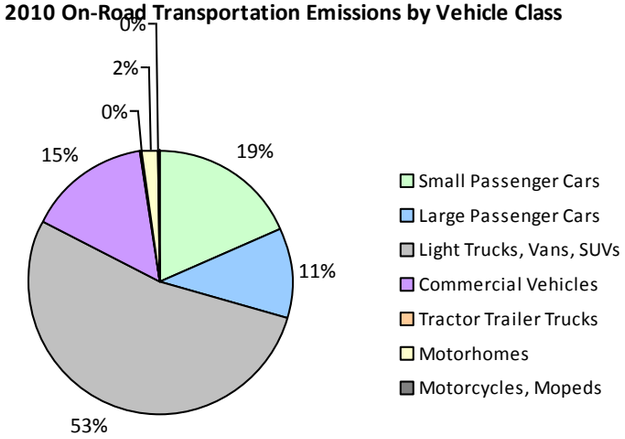
2010 Total Emissions by Fuel Type



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	283	447,867 L	16,800	15,674	1,063	277	428,222 L	16,400	14,987	961
	Diesel Fuel			21,000	342	25			24,300	265	18
Large Passenger Cars	Hybrid								15,400	64	4
	Gasoline	144	247,195 L	15,300	8,652	587	149	254,359 L	15,300	8,903	571
	Diesel Fuel			12,100	48	4					
Light Trucks, Vans, SUVs	Hybrid								18,300	57	4
	Gasoline	380	1,019,680 L	18,300	35,688	2,439	425	1,177,524 L	19,100	41,213	2,668
	Diesel Fuel	16	35,532 L	12,000	1,362	97	14	39,353 L	17,100	1,508	104
	Other Fuel			8,700	38	4			36,600	117	7
Commercial Vehicles	Gasoline	27	82,490 L	17,900	2,887	194	39	116,395 L	17,600	4,074	262
	Diesel Fuel	36	123,275 L	19,400	4,722	331	55	208,869 L	21,300	7,999	546
	Other Fuel			14,800	150	9			12,600	64	4
Tractor Trailer Trucks	Diesel Fuel			18,800	538	37			18,500	258	18
Motorhomes	Gasoline			21,000	414	28			20,700	738	46
	Diesel Fuel			16,000	725	50			17,300	518	35
Motorcycles, Mopeds	Gasoline	20	4,727 L	5,100	165	12	26	7,263 L	6,000	255	16
Totals		**906**	**1,960,766 L**	**16,984**	**71,405**	**4,880**	**985**	**1,960,766 L**	**17,455**	**81,020**	**5,264**

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Wood	N/A	8,037 GJ	8,037	163	N/A	7,736 GJ	7,736	157
	Heating Oil	N/A	2,066 GJ	2,066	146	N/A	1,989 GJ	1,989	136
	Propane	N/A	3,633 GJ	3,633	222	N/A	3,497 GJ	3,497	213
	Natural Gas	352	24,061 GJ	24,061	1,207	355	22,077 GJ	22,077	1,107
	Electricity	471	5,123,767 kWh	18,446	31	450	5,028,484 kWh	18,103	30
Commercial/Small-Medium Industrial	Natural Gas	13	1,499 GJ	1,499	75	12	1,200 GJ	1,200	60
	Electricity	25	511,395 kWh	1,841	3	23	300,054 kWh	1,080	2
Totals		**861**		**59,583**	**1,847**	**840**		**55,682**	**1,705**

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	473 t	N/A	787	0	480 t	N/A	782
Totals		**0**			**787**	**0**			**782**

Totals for Transportation, Buildings and Solid Waste

Fuel Type	2007 (Population: 1,021)			2010 (Population: 1,046)		
	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	0 L	0		0 L	121	8
Gasoline	1,801,959 L	63,480	4,323	1,983,763 L	70,170	4,524
Diesel Fuel	158,807 L	7,737	544	248,222 L	10,548	721
Other Fuel	0 L	188	13	0 L	181	11
Wood	8,037 GJ	8,037	163	7,736 GJ	7,736	157
Heating Oil	2,066 GJ	2,066	146	1,989 GJ	1,989	136
Propane	3,633 GJ	3,633	222	3,497 GJ	3,497	213
Natural Gas	25,560 GJ	25,560	1,282	23,277 GJ	23,277	1,167
Electricity	5,635,162 kWh	20,287	34	5,328,538 kWh	19,183	32
Solid Waste	473 t	0	787	480 t	0	782
Grand Totals		**130,988**	**7,514**		**136,702**	**7,751**

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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	400	49	400	99	395	95
Semi-Detached House	0	0	0	0	5	1
Row House	0	0	0	0	0	0
Apartment, Duplex	0	0	0	0	5	1
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	10	1	5	1	10	2
Other Single Attached House	0	0	0	0	0	0
Movable Dwelling	0	0	0	0	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	400	79	330	80	390	82
Car, Truck,Van as Passenger	80	16	45	11	30	6
Public Transit	0	0	10	2	35	7
Walked	25	5	15	4	10	2
Bicycle	0	0	10	2	0	0
Motorcycle	0	0	0	0	10	2
Taxicab	0	0	0	0	0	0
Other Method	0	0	0	0	0	0

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	1	1
Agricultural Land Reserve	0	0
Other land use	132	99
Total Parks and Protected Area	1	1
Total Land Area	133	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	1	1
Agricultural Land Reserve	0	0
Other land use	132	99
Total Parks and Protected Area	1	1
Total Land Area	133	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

Notice to the Reader