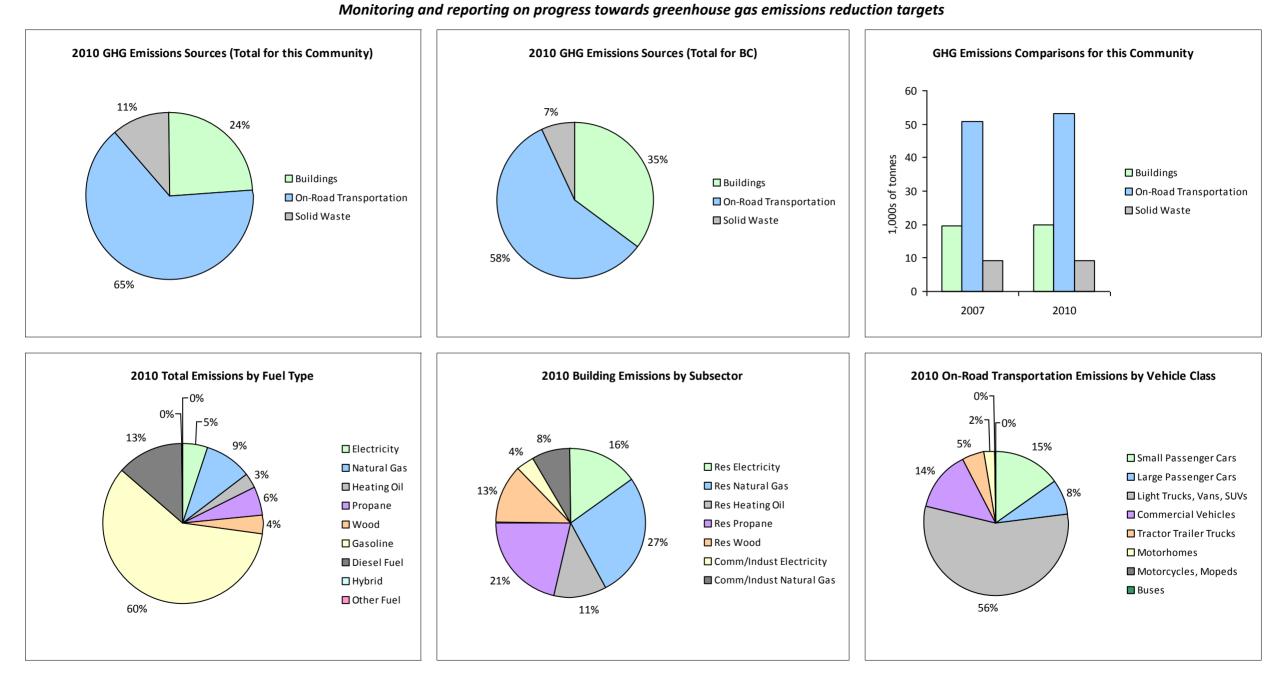


2010 Community Energy and Emissions Inventory

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# **Core Items**

				2007					2010		
On-Road Transportation		Connections	Consumption	Avg VKT (km)	Energy (GJ)	C02e (t)	Connections	Consumption	Avg VKT (km)	Energy (GJ)	C02e (t)
Small Passenger Cars	Hybrid								17,300	157	9
	Gasoline	2,410	3,302,087 L	14,800	115,571	7,892	2,535	3,422,544 L	14,500	119,788	7,719
	Diesel Fuel	72	109,187 L	23,700	4,183	298	93	136,319 L	22,000	5,222	362
Large Passenger Cars	Hybrid	11	9,381 L	22,200	328	21	24	26,399 L	21,600	924	58
	Gasoline	1,232	1,965,226 L	14,200	68,782	4,690	1,209	1,876,198 L	13,600	65,666	4,229
	Diesel Fuel	22	31,905 L	14,100	1,223	85	40	43,695 L	11,900	1,675	115
Light Trucks, Vans, SUVs	Hybrid			24,700	300	20	18	36,279 L	24,400	1,269	80
	Gasoline	4,229	11,069,513 L	18,800	387,433	26,563	4,745	12,386,124 L	18,700	433,514	28,145
	Diesel Fuel	208	482,954 L	13,600	18,496	1,316	168	451,734 L	16,400	17,301	1,196
	Other Fuel	20	41,944 L	12,500	1,061	65	19	34,121 L	12,500	863	53
Commercial Vehicles	Gasoline	318	955,590 L	19,100	33,445	2,243	372	1,106,914 L	18,700	38,742	2,476
	Diesel Fuel	334	1,254,836 L	21,600	48,061	3,378	433	1,835,789 L	24,200	70,311	4,794
	Other Fuel	19	50,127 L	14,000	1,268	76	12	22,215 L	10,900	563	34
Tractor Trailer Trucks	Diesel Fuel	91	1,087,044 L	23,900	41,633	2,925	87	1,022,504 L	23,300	39,163	2,670
Motorhomes	Gasoline	91	253,999 L	20,100	8,889	592	105	290,471 L	20,000	10,167	647
	Diesel Fuel	50	169,951 L	18,300	6,510	455	52	186,854 L	18,500	7,155	489
Motorcycles, Mopeds	Gasoline	179	37,626 L	4,800	1,317	87	240	60,579 L	5,700	2,119	134
Buses	Gasoline		· ·	20,600	472	33			17,700	378	24
	Diesel Fuel			20,800	403	28			27,300	179	13
Totals		9,286	20,821,370 L	16,944	739,375	50,767	10,152	20,821,370 L	16,984	815,156	53,247

			20	007				2010	
Buildings		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Wood	N/A	133,680 GJ	133,680	2,708	N/A	129,407 GJ	129,407	2,622
	Heating Oil	N/A	34,361 GJ	34,361	2,422	N/A	33,263 GJ	33,263	2,275
	Propane	N/A	72,463 GJ	72,463	4,421	N/A	70,147 GJ	70,147	4,280
	Natural Gas	1,690	107,582 GJ	107,582	5,396	1,865	104,652 GJ	104,652	5,250
	Electricity	8,401	128,134,818 kWh	461,285	3,204	8,604	124,633,002 kWh	448,678	3,116
Commercial/Small-Medium Industrial	Natural Gas	93	12,949 GJ	12,949	650	71	32,734 GJ	32,734	1,642
	Electricity	790	34,056,534 kWh	122,603	851	851	32,460,513 kWh	116,858	812
Totals		10,974		944,923	19,652	11,391		935,739	19,997



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				2007				2010	
Solid Waste		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	7,230 t	N/A	9,204	0	6,605 t	N/A	9,309
Totals		0			9,204	0			9,309

## Memo Items

			20	007				2010	
Buildings		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Large Industrial	Electricity	1		0	0	1		0	0
Totals		1			0	1			0

# Totals for Transportation, Buildings and Solid Waste

	2007 (Pop	oulation: 14,674)	2010 (Population: 15,244)				
Fuel Type	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)	
Hybrid	9,381 L	628	41	62,678 L	2,350	147	
Gasoline	17,584,041 L	615,909	42,100	19,142,830 L	670,374	43,374	
Diesel Fuel	3,135,877 L	120,509	8,485	3,676,895 L	141,006	9,639	
Other Fuel	92,071 L	2,329	141	56,336 L	1,426	87	
Wood	133,680 GJ	133,680	2,708	129,407 GJ	129,407	2,622	
Heating Oil	34,361 GJ	34,361	2,422	33,263 GJ	33,263	2,275	
Propane	72,463 GJ	72,463	4,421	70,147 GJ	70,147	4,280	
Natural Gas	120,531 GJ	120,531	6,046	137,386 GJ	137,386	6,892	
Electricity	162,191,352 kWh	583,888	4,055	157,093,515 kWh	565,536	3,928	
Solid Waste	7,230 t	0	9,204	6,605 t	0	9,309	
Grand Totals		1,684,298	79,623		1,750,895	82,553	



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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		200	1	2006	
	Units	%	Units	%	Units	%
Single Detached House	4,700	34	5,050	92	5,595	92
Semi-Detached House	85	1	30	1	120	2
Row House	5	0	5	0	20	0
Apartment, Duplex	180	1	80	1	145	2
Apartment, 5 storeys or higher	0	0	0	0	10	0
Apartment, under 5 storeys	20	0	35	1	15	0
Other Single Attached House	0	0	0	0	20	0
Movable Dwelling	305	2	305	6	170	3

### 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	13,397	4	
Local Parks	1,108	0	
Agricultural Land Reserve	3,101	1	
Other land use	359,527	95	
Total Parks and Protected Area	14,504	4	
Total Land Area	377,132	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	13,397	4
Local Parks	1,108	0
Agricultural Land Reserve	3,101	1
Other land use	359,527	95
Total Parks and Protected Area	14,504	4
Total Land Area	377,132	100

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

#### 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	1996			2006	
	Units	%	Units	%	Units	%
Car, Truck, Van as Driver	3,915	77	4,035	77	4,805	77
Car, Truck, Van as Passenger	435	9	530	10	630	10
Public Transit	240	5	235	4	340	5
Walked	275	5	255	5	295	5
Bicycle	25	0	55	1	45	1
Motorcycle	25	0	15	0	0	0
Taxicab	10	0	10	0	0	0
Other Method	140	3	105	2	145	2



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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) <u>http://www.cscd.gov.bc.ca/lgd/greencommunities/carip.htm</u>, and on the <u>http://toolkit.bc.ca</u> 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.



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## 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 (<u>http://www.toolkit.bc.ca</u>), 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: <a href="http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html">http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html</a> For guidance on target setting and community actions, go to <a href="http://www.toolkit.bc.ca">http://www.toolkit.bc.ca</a> and </a>

#### 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,