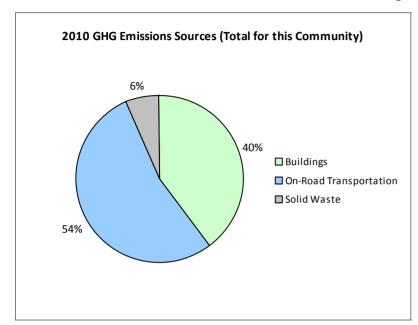
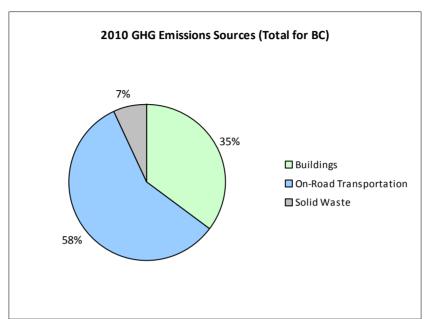
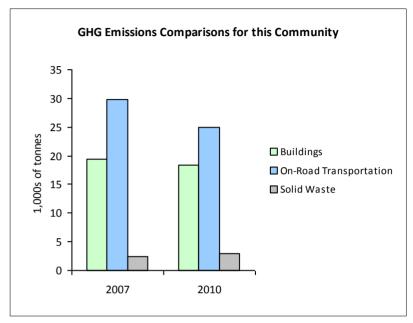


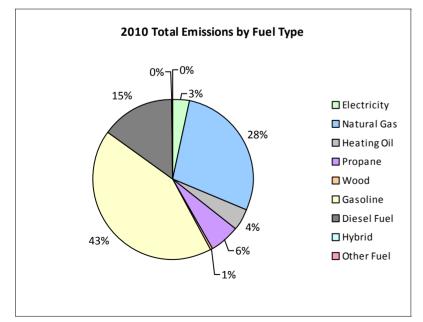
### **2010 Community Energy and Emissions Inventory**

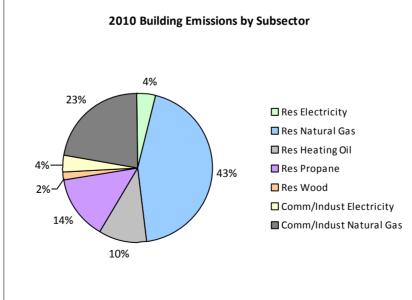
### Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

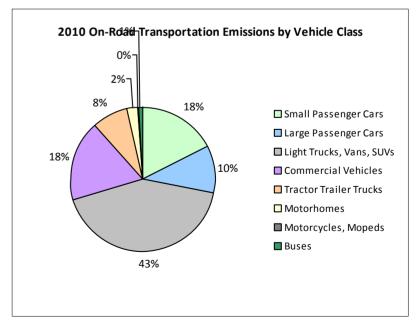














## 2010 Community Energy and Emissions Inventory

## Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

## **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								12,000	23	0
	Gasoline	1,391	2,003,715 L	15,300	70,131	4,779	1,341	1,879,237 L	14,900	65,774	4,232
	Diesel Fuel	56	83,739 L	22,100	3,208	228	51	77,964 L	22,600	2,986	207
Large Passenger Cars	Hybrid			18,000	57	5			20,600	233	15
	Gasoline	799	1,263,043 L	13,700	44,206	3,019	743	1,110,325 L	13,100	38,862	2,509
	Diesel Fuel	19	19,247 L	10,300	738	52	10	9,935 L	10,100	381	27
	Other Fuel			10,400	139	8			12,600	45	4
Light Trucks, Vans, SUVs	Hybrid								23,500	146	8
	Gasoline	2,000	4,491,209 L	15,700	157,193	10,782	2,058	4,422,180 L	15,100	154,776	10,063
	Diesel Fuel	105	221,939 L	12,200	8,500	605	79	174,811 L	13,000	6,696	462
	Other Fuel	18	33,346 L	11,200	844	52			9,300	350	21
Commercial Vehicles	Gasoline	290	787,861 L	16,400	27,576	1,850	244	625,290 L	15,400	21,885	1,399
	Diesel Fuel	282	992,461 L	19,200	38,011	2,671	312	1,182,402 L	20,900	45,285	3,087
	Other Fuel	11	23,587 L	11,800	596	36			12,000	400	24
Tractor Trailer Trucks	Gasoline			9,500	205	13					
	Diesel Fuel	121	1,751,597 L	34,800	67,087	4,714	58	809,784 L	33,600	31,016	2,116
	Other Fuel			8,600	58	3					
Motorhomes	Gasoline	49	123,527 L	17,400	4,323	289	53	132,948 L	17,200	4,653	295
	Diesel Fuel	40	130,446 L	17,300	4,997	351	30	103,216 L	17,400	3,953	269
	Other Fuel			16,000	315	19			9,800	39	2
Motorcycles, Mopeds	Gasoline	75	17,388 L	5,100	609	41	71	17,675 L	5,400	618	40
Buses	Gasoline			16,300	448	30			15,800	338	22
	Diesel Fuel	13	64,543 L	19,300	2,473	173	17	78,255 L	17,600	2,997	205
Totals		5,269	12,007,648 L	15,797	431,714	29,720	5,067	12,007,648 L	15,278	381,456	25,007



## 2010 Community Energy and Emissions Inventory

## Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

2007			2007				2010		
Buildings		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Wood	N/A	17,760 GJ	17,760	360	N/A	16,543 GJ	16,543	335
	Heating Oil	N/A	29,781 GJ	29,781	2,099	N/A	27,741 GJ	27,741	1,897
	Propane	N/A	44,036 GJ	44,036	2,687	N/A	41,020 GJ	41,020	2,503
	Natural Gas	2,175	172,979 GJ	172,979	8,677	2,249	159,842 GJ	159,842	8,018
	Electricity	2,947	29,366,581 kWh	105,720	734	3,039	30,576,771 kWh	110,076	764
Commercial/Small-Medium Industrial	Natural Gas	272	84,309 GJ	84,309	4,229	267	82,382 GJ	82,382	4,132
	Electricity	520	26,039,840 kWh	93,743	651	524	28,246,442 kWh	101,687	706
Totals		5,914		548,328	19,437	6,079		539,291	18,355

				2007				2010	
Solid Waste		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	2,374 t	N/A	2,390	0	3,954 t	N/A	2,917
Totals		0			2,390	0			2,917

## **Memo Items**

			2	2007				2010	
Buildings		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Large Industrial	Natural Gas	2		0	0	1		0	0
	Electricity	1		0	0	1		0	0
Totals		3			0	2			0

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## 2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

# **Totals for Transportation, Buildings and Solid Waste**

	2007 (Po	pulation: 6,160)	2010 (Population: 6,322)			
Fuel Type	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	0 L	57	5	0 L	402	23
Gasoline	8,686,743 L	304,691	20,803	8,187,655 L	286,906	18,560
Diesel Fuel	3,263,972 L	125,014	8,794	2,436,367 L	93,314	6,373
Other Fuel	56,933 L	1,952	118	0 L	834	51
Wood	17,760 GJ	17,760	360	16,543 GJ	16,543	335
Heating Oil	29,781 GJ	29,781	2,099	27,741 GJ	27,741	1,897
Propane	44,036 GJ	44,036	2,687	41,020 GJ	41,020	2,503
Natural Gas	257,288 GJ	257,288	12,906	242,224 GJ	242,224	12,150
Electricity	55,406,421 kWh	199,463	1,385	58,823,213 kWh	211,763	1,470
Solid Waste	2,374 t	0	2,390	3,954 t	0	2,917
<b>Grand Totals</b>		980,042	51,547		920,747	46,279

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### 2010 Community Energy and Emissions Inventory

#### 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	1,900	43	1,915	74	1,950	73
Semi-Detached House	35	1	35	1	60	2
Row House	95	2	105	4	130	5
Apartment, Duplex	40	1	25	1	35	1
Apartment, 5 storeys or higher	10	0	0	0	5	0
Apartment, under 5 storeys	295	7	240	9	225	8
Other Single Attached House	15	0	10	0	5	0
Movable Dwelling	140	3	255	10	245	9

#### **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	12	0	
Local Parks	92	2	
Agricultural Land Reserve	357	8	
Other land use	4,111	90	
Total Parks and Protected Area	104	2	
Total Land Area	4,572	100	

<sup>\*</sup> Total is net of Indian Reserves

### 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	1,800	77	1,875	77	1,905	76
Car, Truck, Van as Passenger	180	8	175	7	240	10
Public Transit	0	0	10	0	25	1
Walked	280	12	240	10	255	10
Bicycle	55	2	65	3	50	2
Motorcycle	0	0	0	0	0	0
Taxicab	0	0	0	0	10	0
Other Method	30	1	55	2	10	0

#### **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	12	0
Local Parks	92	2
Agricultural Land Reserve	357	8
Other land use	4,111	90
Total Parks and Protected Area	104	2
Total Land Area	4,572	100

<sup>\*</sup> Net of Crown land, parks, Indian Reserves, water features, airports, ALR, waste disposal site

<sup>\*\*</sup> Quantity of parkland may be underestimated

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## 2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

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### 2010 Community Energy and Emissions Inventory

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



### 2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

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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 (<a href="http://www.toolkit.bc.ca">http://www.toolkit.bc.ca</a>), 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 href="http://www.cd.gov.bc.ca/lgd/greencommunities/targets.htm">http://www.cd.gov.bc.ca/lgd/greencommunities/targets.htm</a>

#### We Need Your Feedback

To continue to guide us on CEEI, please take the time to contact us directly at <a href="mailto:CEEIRPT@gov.bc.ca">CEEIRPT@gov.bc.ca</a>

#### 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,