

2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

Page 1 of 7 February 20, 2014





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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								14,000	28	0
	Gasoline	1,147	1,813,791 L	16,600	63,483	4,300	1,152	1,872,146 L	17,100	65,525	4,198
	Diesel Fuel	57	103,895 L	26,300	3,979	284	57	100,225 L	25,200	3,839	266
	Other Fuel								28,300	76	4
Large Passenger Cars	Hybrid								21,600	322	21
	Gasoline	754	1,322,386 L	15,400	46,284	3,134	711	1,260,125 L	15,500	44,105	2,825
	Diesel Fuel	10	10,473 L	10,100	401	28	10	8,897 L	9,200	341	24
Light Trucks, Vans, SUVs	Hybrid								22,700	363	24
	Gasoline	2,138	5,606,409 L	17,600	196,225	13,402	2,400	6,476,234 L	18,300	226,668	14,674
	Diesel Fuel	117	229,668 L	10,900	8,797	626	92	210,675 L	12,900	8,069	557
	Other Fuel	12	23,536 L	11,500	596	36			10,600	324	20
Commercial Vehicles	Gasoline	150	464,809 L	18,200	16,269	1,092	212	706,798 L	19,700	24,738	1,582
	Diesel Fuel	185	626,366 L	18,900	23,989	1,685	196	701,364 L	20,100	26,861	1,831
	Other Fuel			12,100	224	14			9,400	85	5
Tractor Trailer Trucks	Gasoline			12,000	94	7			10,700	84	4
	Diesel Fuel	21	240,493 L	27,000	9,210	648	23	373,749 L	38,600	14,315	975
	Other Fuel								13,000	80	4
Motorhomes	Gasoline	23	65,880 L	19,900	2,306	154	25	72,391 L	19,700	2,534	160
	Diesel Fuel	25	77,793 L	17,400	2,980	209	21	65,480 L	16,900	2,507	171
	Other Fuel			24,600	199	13			16,100	130	8
Motorcycles, Mopeds	Gasoline	63	13,207 L	4,500	462	31	70	18,124 L	5,600	634	40
Buses	Gasoline			18,200	213	15			13,300	235	16
	Diesel Fuel			23,100	1,169	82			24,300	1,943	133
Totals		4,702	10,598,706 L	16,857	376,880	25,760	4,969	10,598,706 L	17,629	423,806	27,542



Page 3 of 7 February 20, 2014

2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

			2	007				2010	
Buildings		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Wood	N/A	52,190 GJ	52,190	1,057	N/A	50,235 GJ	50,235	1,018
	Heating Oil	N/A	13,389 GJ	13,389	944	N/A	12,888 GJ	12,888	881
	Propane	N/A	23,504 GJ	23,504	1,434	N/A	22,623 GJ	22,623	1,380
	Natural Gas	3,205	268,044 GJ	268,044	13,445	3,269	261,100 GJ	261,100	13,097
	Electricity	4,056	30,965,758 kWh	111,477	774	4,203	33,060,312 kWh	119,017	827
Commercial/Small-Medium Industrial	Natural Gas	245	124,884 GJ	124,884	6,264	243	130,159 GJ	130,159	6,529
	Electricity	477	24,519,119 kWh	88,269	613	482	25,660,064 kWh	92,376	642
Totals		7,983		681,757	24,531	8,197		688,398	24,374

				2007				2010	
Solid Waste		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	6,163 t	N/A	1,291	0	6,532 t	N/A	2,953
Totals		0			1,291	0			2,953

Memo Items

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



2010 Community Energy and Emissions Inventory

Page 4 of 7 February 20, 2014

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

Totals for Transportation, Buildings and Solid Waste

	2007 (Po	pulation: 6,322)	2010 (Population: 6,648)			
Fuel Type	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	0 L	0		0 L	713	45
Gasoline	9,286,482 L	325,336	22,135	10,405,818 L	364,523	23,499
Diesel Fuel	1,288,688 L	50,525	3,562	1,460,390 L	57,875	3,957
Other Fuel	23,536 L	1,019	63	0 L	695	41
Wood	52,190 GJ	52,190	1,057	50,235 GJ	50,235	1,018
Heating Oil	13,389 GJ	13,389	944	12,888 GJ	12,888	881
Propane	23,504 GJ	23,504	1,434	22,623 GJ	22,623	1,380
Natural Gas	392,928 GJ	392,928	19,709	391,259 GJ	391,259	19,626
Electricity	55,484,877 kWh	199,746	1,387	58,720,376 kWh	211,393	1,469
Solid Waste	6,163 t	0	1,291	6,532 t	0	2,953
Grand Totals		1,058,637	51,582		1,112,204	54,869



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		200	1	2006		
	Units	%	Units	%	Units	%	
Single Detached House	2,285	44	2,360	81	2,315	82	
Semi-Detached House	70	1	90	3	95	3	
Row House	75	1	90	3	105	4	
Apartment, Duplex	50	1	30	1	15	1	
Apartment, 5 storeys or higher	0	0	0	0	0	0	
Apartment, under 5 storeys	260	5	280	10	240	8	
Other Single Attached House	20	0	10	0	5	0	
Movable Dwelling	110	2	40	1	55	2	

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	11	0	
Agricultural Land Reserve	130	2	
Other land use	5,999	98	
Total Parks and Protected Area	11	0	
Total Land Area	6,140	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	11	0						
Agricultural Land Reserve	130	2						
Other land use	5,999	98						
Total Parks and Protected Area	11	0						
Total Land Area	6,140	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		2001	L	2006	
	Units	%	Units	%	Units	%
Car, Truck, Van as Driver	2,060	76	2,220	79	2,015	73
Car, Truck, Van as Passenger	250	9	255	9	320	12
Public Transit	10	0	0	0	10	0
Walked	335	12	260	9	305	11
Bicycle	25	1	50	2	50	2
Motorcycle	0	0	0	0	0	0
Taxicab	0	0	0	0	0	0
Other Method	40	1	15	1	55	2

Page 5 of 7 February 20, 2014



Kimberley City 2010 Community Energy and Emissions Inventory Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

Page 6 of 7 February 20, 2014

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2010 Community Energy and Emissions Inventory

Page 7 of 7 February 20, 2014

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) <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.



2010 Community Energy and Emissions Inventory

Page 8 of 7 February 20, 2014

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

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: 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

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,