

2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

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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	Gasoline	785	1,288,681 L	17,500	45,104	3,054	756	1,187,825 L	16,700	41,574	2,666
	Diesel Fuel	32	54,048 L	24,900	2,070	148	36	52,341 L	21,500	2,004	139
Large Passenger Cars	Hybrid								22,100	76	3
	Gasoline	497	1,029,681 L	18,300	36,039	2,441	450	868,640 L	17,000	30,402	1,952
	Diesel Fuel			17,200	559	39	12	14,122 L	12,400	541	38
	Other Fuel								9,800	32	3
Light Trucks, Vans, SUVs	Hybrid			33,900	94	7			31,600	373	24
	Gasoline	1,980	6,161,211 L	21,100	215,643	14,718	2,305	6,999,875 L	20,700	244,995	15,870
	Diesel Fuel	126	317,175 L	14,100	12,147	862	88	241,164 L	15,800	9,237	638
	Other Fuel	12	26,986 L	13,100	682	41			17,200	466	28
Commercial Vehicles	Gasoline	227	852,200 L	22,000	29,826	2,002	255	922,316 L	21,200	32,280	2,063
	Diesel Fuel	277	1,225,902 L	25,200	46,953	3,299	324	1,592,336 L	27,900	60,986	4,158
	Other Fuel			15,500	448	27			14,000	135	8
Tractor Trailer Trucks	Gasoline			31,200	665	45			19,200	608	38
	Diesel Fuel	95	2,317,427 L	58,200	88,758	6,236	86	1,793,220 L	49,700	68,680	4,682
Motorhomes	Gasoline	31	102,215 L	22,600	3,577	239	30	97,397 L	22,300	3,408	216
	Diesel Fuel	23	83,571 L	19,800	3,201	225	21	83,106 L	20,100	3,183	216
Motorcycles, Mopeds	Gasoline	103	26,329 L	5,600	921	62	157	44,530 L	6,300	1,558	98
Buses	Gasoline	12	43,127 L	21,900	1,509	103	29	91,980 L	23,600	3,219	206
	Diesel Fuel	10	56,138 L	21,300	2,151	151	11	67,614 L	24,200	2,590	176
Totals		4,210	13,584,691 L	20,678	490,347	33,699	4,560	13,584,691 L	20,187	506,347	33,222

				2007				2010	
Buildings		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Wood	N/A	88,039 GJ	88,039	1,784	N/A	84,740 GJ	84,740	1,717
	Heating Oil	N/A	11,884 GJ	11,884	838	N/A	11,439 GJ	11,439	782
	Propane	N/A	96,922 GJ	96,922	5,913	1,279	83,212 GJ	83,212	5,077
	Electricity	3,417	44,591,867 kWh	160,531	1,115	3,497	46,381,691 kWh	166,974	1,160
Commercial/Small-Medium Industrial	Propane	239	124,436 GJ	124,436	7,592	250	125,600 GJ	125,600	7,663
	Electricity	684	43,532,269 kWh	156,716	1,088	756	44,350,472 kWh	159,662	1,109
Totals		4,340		638,528	18,330	5,782		631,627	17,508



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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	6,038 t	N/A	4,574	0	4,529 t	N/A	5,810
Totals		0			4,574	0			5,810

Memo Items

			200	07				2010	
Buildings		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Large Industrial	Electricity	3		0	0	3		0	0
Totals		3			0	3			0

Totals for Transportation, Buildings and Solid Waste

	2007 (Po	pulation: 7,273)	2010 (Population: 7,271)			
Fuel Type	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	0 L	94	7	0 L	449	27
Gasoline	9,503,444 L	333,284	22,664	10,212,563 L	358,044	23,109
Diesel Fuel	4,054,261 L	155,839	10,960	3,843,903 L	147,221	10,047
Other Fuel	26,986 L	1,130	68	0 L	633	39
Wood	88,039 GJ	88,039	1,784	84,740 GJ	84,740	1,717
Heating Oil	11,884 GJ	11,884	838	11,439 GJ	11,439	782
Propane	221,358 GJ	221,358	13,505	208,812 GJ	208,812	12,740
Electricity	88,124,136 kWh	317,247	2,203	90,732,163 kWh	326,636	2,269
Solid Waste	6,038 t	0	4,574	4,529 t	0	5,810
Grand Totals		1,128,875	56,603		1,137,974	56,540



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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	2,070	40	2,195	71	2,225	72
Semi-Detached House	110	2	125	4	180	6
Row House	30	1	45	1	45	1
Apartment, Duplex	105	2	30	1	60	2
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	420	8	375	12	455	15
Other Single Attached House	0	0	80	3	0	0
Movable Dwelling	415	8	240	8	125	4

Parks and Protected Greenspace

Parks and protected greenspaces are important for the protection and enhancement of community carbon sinks.

	2009		
	Units	%	
National Parks	8	0	
Provincial Parks / Protected Areas	0	0	
Local Parks	42	1	
Agricultural Land Reserve	10	0	
Other land use	4,706	99	
Total Parks and Protected Area	49	1	
Total Land Area	4,765	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.

Units	%
8	0
0	0
42	1
10	0
4,706	99
49	1
4,765	100
	0 42 10 4,706 49 4,765

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	2,280	63	2,580	75	2,490	70
Car, Truck, Van as Passenger	335	9	180	5	400	11
Public Transit	25	1	0	0	20	1
Walked	770	21	490	14	440	12
Bicycle	180	5	155	5	190	5
Motorcycle	0	0	0	0	10	0
Taxicab	0	0	0	0	15	0
Other Method	45	1	40	1	15	0

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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: 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,