

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	Hybrid	14	7,817 L	11,800	274	19	15	8,090 L	11,100	284	18
	Gasoline	2,265	2,202,608 L	10,200	77,091	5,290	2,227	2,165,241 L	10,200	75,783	4,906
	Diesel Fuel	114	89,295 L	12,100	3,421	243	115	92,131 L	12,500	3,529	245
Large Passenger Cars	Hybrid	22	13,107 L	12,800	459	31	40	25,618 L	12,900	896	58
	Gasoline	939	1,189,869 L	10,900	41,645	2,847	921	1,158,754 L	10,900	40,556	2,618
	Diesel Fuel	31	28,726 L	9,600	1,100	78	44	37,700 L	9,000	1,443	99
Light Trucks, Vans, SUVs	Hybrid			15,200	210	14	13	15,175 L	14,200	531	34
	Gasoline	3,117	5,352,831 L	12,300	187,349	12,886	3,422	5,761,792 L	12,000	201,663	13,138
	Diesel Fuel	184	379,259 L	11,800	14,526	1,032	147	322,937 L	12,900	12,368	853
	Other Fuel	21	32,934 L	9,600	833	51	11	16,145 L	8,800	408	24
Commercial Vehicles	Hybrid								16,400	67	4
	Gasoline	173	370,563 L	12,800	12,969	869	198	412,533 L	12,500	14,439	922
	Diesel Fuel	208	683,384 L	17,200	26,173	1,838	262	948,615 L	19,000	36,332	2,476
	Other Fuel	13	22,821 L	9,400	578	35			9,300	299	18
Tractor Trailer Trucks	Gasoline								13,500	128	8
	Diesel Fuel	33	208,934 L	15,500	8,002	563	38	260,729 L	16,700	9,985	680
Motorhomes	Gasoline	93	203,769 L	16,000	7,132	476	108	237,856 L	16,200	8,325	529
	Diesel Fuel	44	122,580 L	16,100	4,695	329	45	128,764 L	16,200	4,932	336
	Other Fuel			26,500	99	6			17,700	199	12
Motorcycles, Mopeds	Gasoline	237	50,472 L	4,900	1,765	118	269	67,848 L	5,900	2,375	151
Buses	Gasoline			14,500	453	30			12,800	490	31
	Diesel Fuel	11	55,147 L	17,700	2,113	148	14	65,273 L	18,500	2,499	170
Totals		7,519	11,014,116 L	11,458	390,887	26,903	7,889	11,014,116 L	11,525	417,531	27,330



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			2	2007				2010	
Buildings		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Wood	N/A	77,457 GJ	77,457	1,569	N/A	75,133 GJ	75,133	1,522
	Heating Oil	N/A	10,276 GJ	10,276	724	N/A	9,967 GJ	9,967	703
	Propane	N/A	9,284 GJ	9,284	566	N/A	9,006 GJ	9,006	549
	Electricity	5,618	99,673,639 kWh	358,825	2,492	5,588	95,187,084 kWh	342,673	2,380
Commercial/Small-Medium Industrial	Electricity	726	26,870,449 kWh	96,734	672	727	27,725,983 kWh	99,813	693
Totals		6,344		552,576	6,023	6,315		536,592	5,847

Totals for Transportation, Buildings and Solid Waste

	2007 (Po	pulation: 9,888)	2010 (Population: 10,214)				
Fuel Type	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)	
Hybrid	20,924 L	943	64	48,883 L	1,778	114	
Gasoline	9,370,112 L	328,404	22,516	9,804,024 L	343,759	22,303	
Diesel Fuel	1,567,325 L	60,030	4,231	1,856,149 L	71,088	4,859	
Other Fuel	55,755 L	1,510	92	16,145 L	906	54	
Wood	77,457 GJ	77,457	1,569	75,133 GJ	75,133	1,522	
Heating Oil	10,276 GJ	10,276	724	9,967 GJ	9,967	703	
Propane	9,284 GJ	9,284	566	9,006 GJ	9,006	549	
Electricity	126,544,088 kWh	455,559	3,164	122,913,067 kWh	442,486	3,073	
Grand Totals		943,463	32,926		954,123	33,177	



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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	3,490	87	3,705	87	3,730	86	
Semi-Detached House	105	3	150	4	165	4	
Row House	105	3	95	2	110	3	
Apartment, Duplex	75	2	100	2	155	4	
Apartment, 5 storeys or higher	0	0	0	0	0	0	
Apartment, under 5 storeys	25	1	55	1	35	1	
Other Single Attached House	0	0	25	1	10	0	
Movable Dwelling	230	6	120	3	110	3	

Parks and Protected Greenspace

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

	2009)
	Units	%
National Parks	152	1
Provincial Parks / Protected Areas	2,236	11
Local Parks	554	3
Agricultural Land Reserve	2,985	15
Other land use	13,694	70
Total Parks and Protected Area	2,943	15
Total Land Area	19,622	100
* Total is not of Indian Pasanyas		

* 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	152	1					
Provincial Parks / Protected Areas	2,236	11					
Local Parks	554	3					
Agricultural Land Reserve	2,985	15					
Other land use	13,694	70					
Total Parks and Protected Area	2,943	15					
Total Land Area	19,622	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		2006	
	Units	%	Units	%	Units	%
Car, Truck, Van as Driver	2,405	76	2,510	78	2,710	76
Car, Truck, Van as Passenger	265	8	275	9	345	10
Public Transit	90	3	60	2	40	1
Walked	180	6	290	9	260	7
Bicycle	55	2	20	1	80	2
Motorcycle	35	1	10	0	40	1
Taxicab	10	0	10	0	10	0
Other Method	110	3	25	1	65	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: 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,