

BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities





Page 2 of 8 June 30, 2010

Sectors

On Road Transport	ation	<u>Vehicles</u>	Consumption	Measurement	Average-VKT(km)	Energy (GJ)	<u>CO2e (t)</u>
Small Passenger Cars	Gasoline	2,538	3,317,756	Litres	12,573	116,121	7,948
	Diesel Fuel	75	69,215	Litres	12,822	2,651	189
	Other Fuel	< 10	3,000	Litres	8,455	115	5
				Small Pa	assenger Cars	118,887	8,142
Large Passenger Cars	Gasoline	1,335	2,821,355	Litres	16,785	98,747	6,728
	Diesel Fuel	49	91,396	Litres	16,555	3,500	249
	Other Fuel	< 10	9,510	Litres	14,162	364	15
				Large Pa	assenger Cars	102,611	6,992
Light Trucks, Vans, SUVs	Gasoline	4,465	12,670,358	Litres	19,586	443,463	30,410
-	Diesel Fuel	349	815,451	Litres	18,467	31,232	2,228
	Other Fuel	39	92,377	Litres	13,265	3,538	142
				Light Tr	ucks, Vans, SUVs	478,233	32,780
Commercial Vehicles	Gasoline	34	134,139	Litres	13,061	4,695	313
	Diesel Fuel	56	264,867	Litres	20,860	10,144	713
	Other Fuel	< 10	22,339	Litres	12,481	856	34
				Comme	rcial Vehicles	15,695	1,060
Tractor Trailer Trucks	Gasoline	< 10	4,166	Litres	7,085	146	10
	Diesel Fuel	89	1,818,554	Litres	52,872	69,651	4,894
	Other Fuel	0	0	Litres	0	-	-
				Tractor	Trailer Trucks	69,797	4,904
Motorhomes	Gasoline	104	109,788	Litres	2,952	3,843	257
	Diesel Fuel	15	16,991	Litres	4,828	651	46
	Other Fuel	< 10	1,384	Litres	2,189	53	2
				Motorho	omes	4,547	305
Motorcycles, Mopeds	Gasoline	160	64,343	Litres	4,854	2,252	150
				Motorcy	cles, Mopeds	2,252	150
Bus	Gasoline	< 10	33,649	Litres	18,295	1,178	79
	Diesel Fuel	< 10	12,782	Litres	44,509	490	34
	Other Fuel	0	0	Litres	0	-	-
				Bus		1,668	113



Page 3 of 8 June 30, 2010

On Road Transportation Totals			Gasol Diesel Other All Fu	ine: : Fuel: 	670,445 118,319 4,926 793,690	45,895 8,353 198 54,446
Buildings	Туре	Connections	Consumption	Measurement	Energy (GJ)	<u>CO2e (t)</u>
Residential	Electricity Natural Gas Heating Oil Propane Wood	8,401 1,690	128,134,818 107,582 41,768 88,083 147,809 Residential	Kilowatt Hours GigaJoules GigaJoules GigaJoules GigaJoules	461,285 107,582 41,768 88,083 147,809 846,527	3,161 5,486 2,944 5,374 55 17,020
Commercial/Small-Medium Industrial	Electricity Natural Gas	790 93	34,056,534 12,950 Commercial/Sma	Kilowatt Hours GigaJoules II-Medium Industrial	122,603 12,950 135,553	840 660 1,500
Buildings Totals			Electri Natura Propa Wood: Heatin Buildi	city: al Gas: ne: g Oil: ngs:	583,888 120,532 88,083 147,809 41,768 982,080	4,001 6,146 5,374 55 2,944 18,520
Solid Waste			Comm	unity Solid Waste	<u>Mass (t)</u> 7,524	<u>CO2e (t)</u> 9,593



Grand Total	CONSUMPTION		ENERGY (GJ)	CO2e (t)
Diesel Fuel	3,089,256	L	118,319	8,353
Electricity	162,191,352	– kWh	583,888	4,001
Gasoline	19,155,554	L	670,445	45,895
Heating Oil	41,768	GJ	41,768	2,944
Natural Gas	120,532	GJ	120,532	6,146
Other Fuel	128,610	L	4,926	198
Propane	88,083	GJ	88,083	5,374
Solid Waste	7,524	Т	0	9,593
Wood	147,809	GJ	147,809	55
– Total of Transportation / Buildings / Solid Waste:			1,775,770 G	J 82,559 tonnes

Memo Items

Buildings	Туре	Connections	Consumption	Measurement	Energy (GJ)	<u>CO2e (t)</u>
Large Industrial	Electricity	1	withheld	Kilowatt Hours	-	-
	Natural Gas	0	0	GigaJoules	-	-
			Larg	ge Industrial	-	-



Supporting Indicators

Below you will find supporting indicators for which data is provided. These are the first five supporting indicators for which data is provided as a part of the updated 2007 CEEI. Columns with all zeros indicate data unavailable in these CEEI reports. Thirteen additional supporting indicators are under consideration for future reports (see next page). Local government feedback is requested on all supporting indicators. Please take the time to complete the short CEEI Survey at http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html or contact us directly at CEEIRPT@gov.bc.ca/cas/mitigation/ceei/index.html or

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.

	199	6	200	1	2006	
	Units	%	Units	%	Units 9	%
Single Detached House	4,700	34	5,050	92	5,595 9)2
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

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		20	2001		2006	
	People	%	People	%	People	%	
Car, Truck, Van as Driver	3,915	77	4,035	77	4,805	77	
Car, Truck,Van as Passenge	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	

Residential Density

* Net of Crown land, parks, Indian Reserves, water features, airports, ALR,waste disposal sites.

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

This data is currently unavailable in the CEEI 2007 Reports.

Commute Distance

Shorter commute distances generally reduce GHG emissions by increasing the likelihood of people walking, cycling or using transit. Commute distance is also indicative of the 'completeness' of a community from an employment perspective.

2006

People %

This data is currently unavailable in the CEEI 2007 Reports.



Parks and Protected Greenspace * Total is net of Indian Reserves ** The quantity of parkland may be underestimated Parks and protected greenspaces are important for the protection and enhancement of community carbon sinks.

	200)9	
	Area (ha)	%	
National Parks	0.0	0.0	
Provincial Parks / Protected Areas	13,396.5	3.6	
Local Parks	1,107.7	0.3	
Agricultural Land Reserve	3,100.8	0.8	
Other land use	359,527.2	95.3	
Total Land Area	377,132.2	100.0	



Supporting Indicators Under Consideration

The following supporting indicators are under consideration for inclusion in future CEEI reports. The 2007 CEEI reports provide these 'placeholder' indicators to give indication of data that may be provided in the future by the Province on an ongoing basis to assist in monitoring actions to reduce GHG emissions and energy consumption. Please submit feedback to <u>CEEIRPT@gov.bc.ca</u> (see survey on CEEI website).

On-Road Transportation (and	I Land Use)						
Proximity to Transit	Persons, dwelling units (du) and employment within 400m of a quality transit stop/line						
Proximity to Services	Persons and dwelling units (du) within 400m of services (e.g. grocery store, school, other retail etc.)						
Transit Ridership	Annual per capita transit ridership						
Buildings							
Residential; Public Building	Average energy use per person per square metre of floor space						
Floor Space	Average residential dwelling unit size						
Solid Waste (and Water)							
Waste Diversion	Tonnes of waste diverted						
Avoided Waste Emissions	Tonnes of CO2e of avoided future emissions due to reduced waste since 2007						
Water Use	Per capita residential water use						
Land-Use Change							
Impervious Surface Cover	% change in impervious surface cover						
Tree Canopy Cover	% change in tree canopy cover						
Community and Renewable E	Energy Supply						
District Energy	# and energy output (e.g. buildings connected, energy consumed in GJ or kWh) of district energy systems by energy type (e.g.						
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						
Energy Recovery From Waste	thermal, geo-exchange) and/or electrical (e.g. solar photovoltaic, small wind, small scale hydro) energy Energy (GJ or kWh) recovered from waste (e.g. from landfill gas, sewage treatment, industrial operations, farm)						



This is your local government's Updated 2007 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 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, and fulfill Milestone One requirements for those local government members of the Federation of Canadian Municipalities' (FCM's) Partners in Climate Protection (PCP) program.

A first in North America!

CEEI is a first in North America and a first step for BC communities. The 2007 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 and medium from large industrial buildings, including updated land-use change and new agricultural sectors as 'memo items', and the first of a suite of 'supporting indicators'. 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 Updated 2007 CEEI Reports, CEEI Data Summary Report, Technical Methods and Guidance Document, and additional information on the Secondary 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 <<u>http://www.toolkit.bc.ca></u> and <<u>http://www.cd.gov.bc.ca/lgd/greencommunities/targets.htm></u>.

We Need Your Feedback:

- To continue to guide us on CEEI, particularly now with the new Indicators. Please take the time to complete the short CEEI Survey at http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html or contact us directly at CEEIRPT@gov.bc.ca/cas/mitigation/ceei/index.html or contact us directly at http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html or contact us directly at http://www.env.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, where you do note inaccuracies, please contact us.