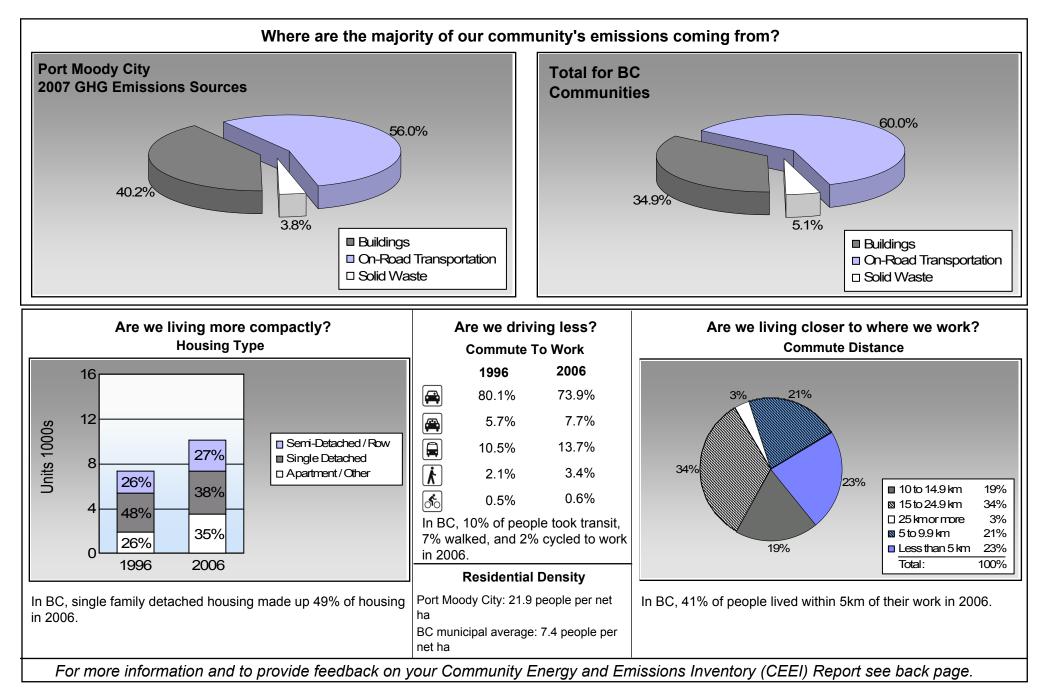


BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities





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	6,860	9,149,567	Litres	13,606	320,235	21,676
	Diesel Fuel	144	146,698	Litres	13,985	5,619	401
	Other Fuel	< 10	951	Litres		36	1
				Small Pa	assenger Cars	325,890	22,078
Large Passenger Cars	Gasoline	3,188	5,574,776	Litres	15,038	195,117	13,160
	Diesel Fuel	26	44,084	Litres	13,180	1,688	120
	Other Fuel	< 10	4,755	Litres	12,517	182	7
				Large Pa	assenger Cars	196,987	13,287
Light Trucks, Vans, SUVs	Gasoline	6,277	12,167,355	Litres	13,656	425,857	28,992
-	Diesel Fuel	165	373,297	Litres	16,782	14,297	1,020
	Other Fuel	21	36,943	Litres	10,591	1,415	57
				Light Tr	ucks, Vans, SUVs	441,569	30,069
Commercial Vehicles	Gasoline	< 10	41,970	Litres	16,213	1,469	98
	Diesel Fuel	56	258,009	Litres	19,981	9,882	694
	Other Fuel	< 10	18,439	Litres	12,158	706	28
				Commercial Vehicles		12,057	820
Tractor Trailer Trucks	Gasoline	< 10	2,380	Litres	7,085	83	6
	Diesel Fuel	73	2,331,259	Litres	81,478	89,287	6,273
				Tractor	Trailer Trucks	89,370	6,279
Motorhomes	Gasoline	97	98,567	Litres	3,140	3,450	231
	Diesel Fuel	14	19,151	Litres	6,477	733	52
	Other Fuel	< 10	1,523	Litres	2,189	58	2
				Motorho	omes	4,241	285
Motorcycles, Mopeds	Gasoline	222	93,821	Litres	5,757	3,284	219
				Motorcy	cles, Mopeds	3,284	219
Bus	Gasoline	< 10	66,203	Litres	30,344	2,317	156
	Diesel Fuel	< 10	66,090	Litres	60,633	2,531	178
				Bus		4,848	334



Page 3 of 8 June 30, 2010

Gasoline:				ine:	951,812	64,538
			Diese	:	124,037	8,738
Other Fuel:					2,397	95
On Road Transportation Totals			All Fu	iels:	1,078,246	73,371
Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	<u>CO2e (t)</u>
Residential	Electricity	11,120	100,847,302	Kilowatt Hours	363,050	2,488
	Natural Gas	7,246	723,945	GigaJoules	723,945	36,922
			Residential		1,086,995	39,410
Commercial/Small-Medium Industrial	Electricity	934	69,960,719	Kilowatt Hours	251,858	1,726
	Natural Gas	384	225,519	GigaJoules	225,519	11,501
			Commercial/Sma	II-Medium Industrial	477,377	13,227
			Electri	city:	614,908	4,214
			Natura	Il Gas:	949,464	48,423
			Propa	ne:		
			Wood			
			Heatir	g Oil:		
Buildings Totals			Buildi	ngs:	1,564,372	52,637
Solid Waste					Mass (t)	<u>CO2e (t)</u>
			Comm	unity Solid Waste	13,631	4,960



Grand Total	CONSUMPTION		ENERGY (GJ)	<u>CO2e (t)</u>
Diesel Fuel	3,238,588	L	124,037	8,738
Electricity	170,808,021	kWh	614,908	4,214
Gasoline	27,194,639	L	951,812	64,538
Natural Gas	949,464	GJ	949,464	48,423
Other Fuel	62,611	L	2,397	95
Solid Waste	13,631	Т	0	4,960
Total of Transportation / Buildings / Solid Waste:			<b>2,642,618</b> GJ	130,968 tonnes

## **Memo Items**

Buildings	Туре	<b>Connections</b>	<u>Consumption</u>	Measurement	Energy (GJ)	<u>CO2e (t)</u>
Large Industrial	Electricity	3	withheld	Kilowatt Hours	-	-
	Natural Gas	10	withheld	GigaJoules	-	-
		-	-			



# 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 <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> or contact us directly at <a href="http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html">CEEIRPT@gov.bc.ca/cas/mitigation/ceei/index.html</a> 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 Units	6 %	200 Units	1 %	2000 Units	6 %	
Single Detached House	3,495	32	3,775	44	3,840	38	
Semi-Detached House	140	1	315	4	395	4	
Row House	1,795	17	1,700	20	2,380	23	
Apartment, Duplex	550	5	750	9	940	9	
Apartment, 5 storeys or higher	160	1	200	2	315	3	
Apartment, under 5 storeys	1,125	10	1,740	20	2,250	22	
Other Single Attached House	10	0	5	0	10	0	
Movable Dwelling	35	0	45	1	0	0	

#### 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	8,480	80	9,655	81	10,415	74	
Car, Truck,Van as Passenge	600	6	745	6	1,080	8	
Public Transit	1,115	11	1,095	9	1,935	14	
Walked	220	2	240	2	475	3	
Bicycle	50	0	85	1	85	1	
Motorcycle	20	0	10	0	40	0	
Taxicab	10	0	0	0	0	0	
Other Method	90	1	50	0	55	0	

#### **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	
Population	32,998.0	
Net Land Area (ha) *	1,504.1	
Residential Density (people pe	er net ha) 21.9	

#### 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.

	200	)6	
	People	%	
Less than 5 km	2,880	23	
5 to 9.9 km	2,675	21	
10 to 14.9 km	2,390	19	
15 to 24.9 km	4,215	34	
25 km or more	415	3	



#### Parks and Protected Greenspace

\*\* The quantity of parkland may be underestimated Parks and protected greenspaces are important for the protection and enhancement of community carbon sinks.

\* Total is net of Indian Reserves

	200	)9	
	Area (ha)	%	
National Parks	0.0	0.0	
Provincial Parks / Protected Areas	0.0	0.0	
Local Parks	1,021.5	38.5	
Agricultural Land Reserve	0.0	0.0	
Other land use	1,633.3	61.5	
Total Land Area	2,654.7	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 Land Use)** Proximity to Transit Persons, dwelling units (du) and employment within 400m of a guality transit stop/line Persons and dwelling units (du) within 400m of services (e.g. grocery store, school, other retail etc.) Proximity to Services Transit Ridership Annual per capita transit ridership **Buildings** Residential; Public Building Average energy use per person per square metre of floor space Energy Intensity Average residential dwelling unit size Floor Space 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 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. 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)



# 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: <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 <<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 <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> or contact us directly at <a href="http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html">CEEIRPT@gov.bc.ca/cas/mitigation/ceei/index.html</a> or contact us directly 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> or contact us directly at <a href="http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html">http://www.env.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, where you do note inaccuracies, please contact us.