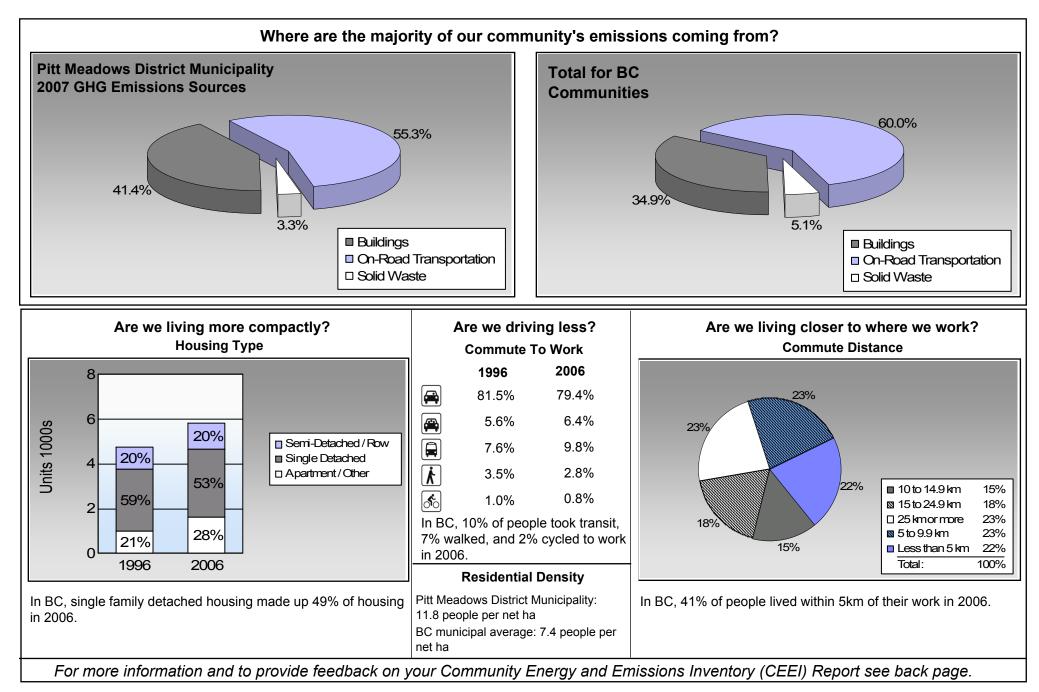


BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities





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## **Sectors**

On Road Transport	ation	<u>Vehicles</u>	Consumption	<u>Measurement</u>	Average-VKT(km)	Energy (GJ)	<u>CO2e (t)</u>
Small Passenger Cars	Gasoline	3,477	4,631,901	Litres	13,342	162,117	11,007
	Diesel Fuel	87	92,380	Litres	13,814	3,538	252
				Small Pa	assenger Cars	165,655	11,259
Large Passenger Cars	Gasoline	1,585	2,811,307	Litres	14,632	98,396	6,652
	Diesel Fuel	32	57,635	Litres	13,875	2,207	157
	Other Fuel	< 10	4,451	Litres	10,476	170	7
				Large Pa	assenger Cars	100,773	6,816
Light Trucks, Vans, SUVs	Gasoline	3,919	7,608,796	Litres	13,469	266,308	18,170
	Diesel Fuel	226	460,641	Litres	15,840	17,643	1,258
	Other Fuel	16	32,669	Litres	10,978	1,251	50
				Light Tr	ucks, Vans, SUVs	285,202	19,478
Commercial Vehicles	Gasoline	19	90,258	Litres	14,853	3,159	211
	Diesel Fuel	90	403,226	Litres	20,223	15,444	1,085
	Other Fuel	< 10	14,365	Litres	11,356	550	22
				Commercial Vehicles		19,153	1,318
Tractor Trailer Trucks	Gasoline	< 10	16,378	Litres	18,058	573	38
	Diesel Fuel	120	3,035,994	Litres	68,235	116,279	8,170
	Other Fuel	< 10	2,380	Litres	7,085	91	4
				Tractor	Trailer Trucks	116,943	8,212
Motorhomes	Gasoline	66	75,050	Litres	3,082	2,627	176
	Diesel Fuel	< 10	6,401	Litres	4,069	245	17
	Other Fuel	< 10	1,384	Litres	2,189	53	2
				Motorho	omes	2,925	195
Motorcycles, Mopeds	Gasoline	157	74,229	Litres	5,625	2,598	173
				Motorcy	cles, Mopeds	2,598	173
Bus	Gasoline	< 10	106,738	Litres	26,204	3,736	250
	Diesel Fuel	16	188,994	Litres	29,623	7,238	509
	Other Fuel	< 10	4,719	Litres		181	7
				Bus		11,155	766



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			Gasoline:		539,514	36,677
			Diesel:		162,594	11,448
			Other	Fuel:	2,296	92
On Road Transportation Totals All I			Jels:	704,404	48,217	
Buildings	Туре	Connections	Consumption	Measurement	Energy (GJ)	<u>CO2e (t)</u>
Residential	Electricity	6,473	75,903,693	Kilowatt Hours	273,253	1,872
	Natural Gas	4,442	412,287	GigaJoules	412,287	21,027
			Residential		685,540	22,899
Commercial/Small-Medium Industrial	Electricity	674	83,788,554	Kilowatt Hours	301,639	2,067
	Natural Gas	319	218,222	GigaJoules	218,222	11,129
			Commercial/Sma	III-Medium Industrial	519,861	13,196
			Electr	city:	574,892	3,939
			Natura	al Gas:	630,509	32,156
			Propa	ne:		
			Wood	:		
			Heatir	ng Oil:		
Buildings Totals			Buildi		1,205,401	36,095
				•		
Solid Waste					<u>Mass (t)</u>	<u>CO2e (t)</u>
			Comm	unity Solid Waste	7,940	2,889



Grand Total		CONSUMPTION		ENERGY (GJ)	<u>CO2e (t)</u>
	Diesel Fuel	4,245,271	L	162,594	11,448
	Electricity	159,692,247	kWh	574,892	3,939
	Gasoline	15,414,657	L	539,514	36,677
	Natural Gas	630,509	GJ	630,509	32,156
	Other Fuel	59,968	L	2,296	92
	Solid Waste	7,940	Т	0	2,889
Total of Transportation / Bu	ildings / Solid Waste:			<b>1,909,805</b> GJ	87,201 tonnes

# **Memo Items**

Type	Connections	<b>Consumption</b>	Measurement	Energy (GJ)	<u>CO2e (t)</u>
Electricity	0	0	Kilowatt Hours	-	-
Natural Gas	4	140,457	GigaJoules	140,457	7,163
		Lar	ge Industrial	140,457	7,163
	Electricity	Electricity 0	Electricity00Natural Gas4140,457	Electricity 0 0 Kilowatt Hours	Electricity00Kilowatt Hours-Natural Gas4140,457GigaJoules140,457



# 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	6	200	1	2006	6	
	Units	%	Units	%	Units	%	
Single Detached House	2,780	37	3,145	59	3,070	53	
Semi-Detached House	60	1	185	3	155	3	
Row House	890	12	835	16	1,000	17	
Apartment, Duplex	225	3	215	4	555	10	
Apartment, 5 storeys or higher	0	0	50	1	5	0	
Apartment, under 5 storeys	735	10	855	16	980	17	
Other Single Attached House	0	0	5	0	15	0	
Movable Dwelling	35	0	10	0	50	1	

#### 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.

	199	6	20	01	200	)6	
	People	%	People	%	People	%	
Car, Truck, Van as Driver	4,845	82	5,855	84	6,260	79	
Car, Truck,Van as Passenge	335	6	475	7	505	6	
Public Transit	450	8	420	6	775	10	
Walked	210	4	170	2	220	3	
Bicycle	60	1	55	1	60	1	
Motorcycle	10	0	25	0	25	0	
Taxicab	0	0	10	0	10	0	
Other Method	35	1	0	0	25	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	17,915.0	
Net Land Area (ha) *	1,518.2	
Residential Density (people p	per net ha) 11.8	

#### 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	1,465	22	
5 to 9.9 km	1,545	23	
10 to 14.9 km	1,010	15	
15 to 24.9 km	1,250	18	
25 km or more	1,545	23	



#### 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.

	2009				
	Area (ha)	%			
National Parks	0.0	0.0			
Provincial Parks / Protected Areas	1,551.2	16.2			
Local Parks	190.5	2.0			
Agricultural Land Reserve	6,874.7	71.8			
Other land use	960.7	10.0			
Total Land Area	9,577.1	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

**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.