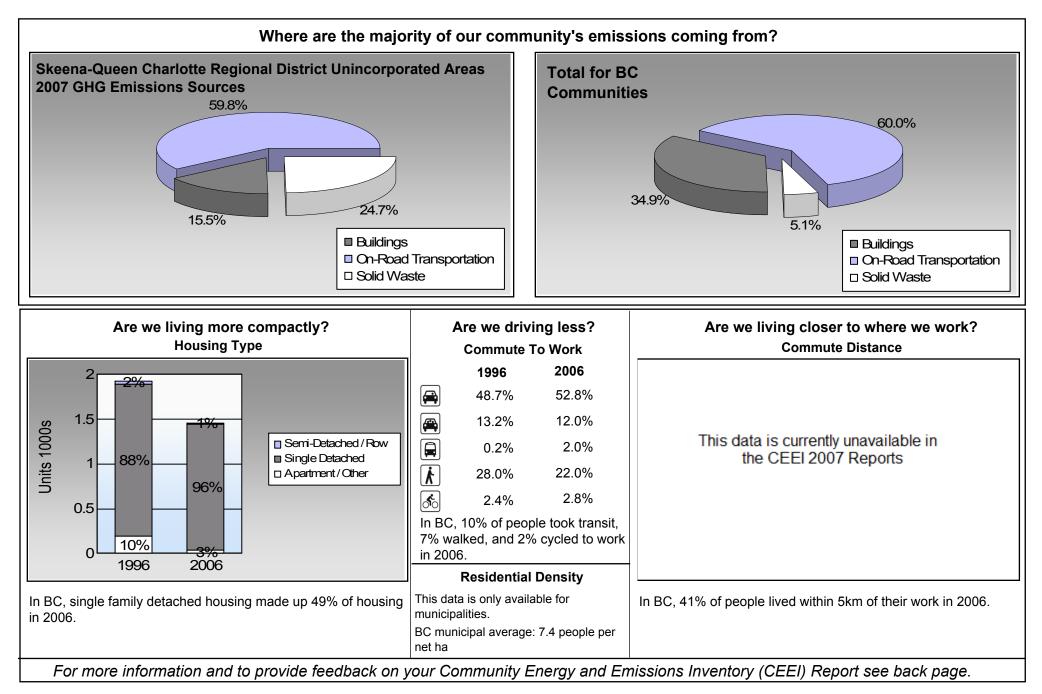


BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities





# **Sectors**

On Road Transport	ation	Vehicles	Consumption	Measurement	Average-VKT(km)	Energy (GJ)	<u>CO2e (t)</u>
Small Passenger Cars	Gasoline	273	362,605	Litres	13,240	12,691	870
	Diesel Fuel	10	11,220	Litres	13,602	430	31
				Small Pa	assenger Cars	13,121	901
Large Passenger Cars	Gasoline	152	340,784	Litres	18,037	11,927	815
	Diesel Fuel	14	30,112	Litres	17,677	1,153	82
	Other Fuel	< 10	1,779	Litres	14,182	68	3
				Large Pa	assenger Cars	13,148	900
Light Trucks, Vans, SUVs	Gasoline	957	2,842,116	Litres	20,471	99,474	6,825
	Diesel Fuel	61	153,855	Litres	19,980	5,893	420
	Other Fuel	< 10	15,652	Litres	13,907	599	24
				Light Tr	ucks, Vans, SUVs	105,966	7,269
Commercial Vehicles	Gasoline	20	89,149	Litres	15,185	3,120	209
	Diesel Fuel	15	67,305	Litres	21,885	2,578	181
	Other Fuel	< 10	8,619	Litres	12,340	330	13
			Commercial Vehicles			6,028	403
Tractor Trailer Trucks	Gasoline	< 10	2,976	Litres	11,614	104	7
	Diesel Fuel	24	426,781	Litres	59,475	16,346	1,148
	Other Fuel	0	0	Litres	0	-	-
				Tractor	Trailer Trucks	16,450	1,155
Motorhomes	Gasoline	< 10	8,507	Litres	2,531	298	20
	Diesel Fuel	< 10	447	Litres	3,680	17	1
	Other Fuel	0	0	Litres	0	-	-
				Motorho	omes	315	21
Motorcycles, Mopeds	Gasoline	18	5,576	Litres	5,628	195	13
				Motorcy	cles, Mopeds	195	13
Bus	Gasoline	< 10	35,093	Litres	19,464	1,228	83
	Diesel Fuel	< 10	32,773	Litres	31,291	1,255	88
				Bus		2,483	171



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			Gasol	ine:	129,037	8,842
			Diese	:	27,672	1,951
			Other	Fuel:	997	40
On Road Transportation Totals			All Fu	iels:	157,706	10,833
Buildings	Туре	Connections	Consumption	Measurement	Energy (GJ)	<u>CO2e (t)</u>
Residential	Electricity	1,208	20,583,150	Kilowatt Hours	74,099	508
	Natural Gas	0	0	GigaJoules	-	-
	Heating Oil		7,756	GigaJoules	7,756	547
	Propane		21,154	GigaJoules	21,154	1,291
	Wood		57,253	GigaJoules	57,253	21
			Residential		160,262	2,367
Commercial/Small-Medium Industrial	Electricity	285	17,654,767	Kilowatt Hours	63,557	436
	Natural Gas	0	0	GigaJoules	-	-
			Commercial/Sma	II-Medium Industrial	63,557	436
			Electr	city:	137,656	944
			Natura	al Gas:	-	-
			Propa	ne:	21,154	1,291
			Wood		57,253	21
			Heatir	ig Oil:	7,756	547
Buildings Totals			Buildi	ngs:	223,819	2,803
Solid Waste					Mass (t)	<u>CO2e (t)</u>
Solid Waste			Comm	unity Solid Waste	3,123	4,481



Grand Total		CONSUMPTION		ENERGY (GJ)	<u>CO2e (t)</u>
	Diesel Fuel	722,493	L	27,672	1,951
	Electricity	38,237,917	kWh	137,656	944
	Gasoline	3,686,806	L	129,037	8,842
	Heating Oil	7,756	GJ	7,756	547
	Natural Gas	0	GJ	0	0
	Other Fuel	26,050	L	997	40
	Propane	21,154	GJ	21,154	1,291
	Solid Waste	3,123	Т	0	4,481
	Wood	57,253	GJ	57,253	21
Total of Transportation / E	Buildings / Solid Waste:			<b>381,525</b> GJ	18,117 tonnes

# **Memo Items**

Buildings	Туре	Connections	<u>Consumption</u>	Measurement	Energy (GJ)	<u>CO2e (t)</u>
Large Industrial	Electricity	0	0	Kilowatt Hours	-	-
	Natural Gas	0	0	GigaJoules	-	-
			Lar	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 <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 %	2006 Units	%	
Single Detached House	1,700	23	1,655	87	1,400	96	
Semi-Detached House	20	0	25	1	10	1	
Row House	10	0	20	1	10	1	
Apartment, Duplex	30	0	50	3	0	0	
Apartment, 5 storeys or higher	0	0	5	0	5	0	
Apartment, under 5 storeys	65	1	30	2	15	1	
Other Single Attached House	25	0	25	1	5	0	
Movable Dwelling	75	1	100	5	15	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.

	1996		2001		2006		
	People	%	People	%	People	%	
Car, Truck, Van as Driver	1,035	49	995	54	660	53	
Car, Truck,Van as Passenge	280	13	255	14	150	12	
Public Transit	5	0	10	1	25	2	
Walked	595	28	455	25	275	22	
Bicycle	50	2	35	2	35	3	
Motorcycle	0	0	5	0	5	0	
Taxicab	0	0	5	0	5	0	
Other Method	160	8	85	5	95	8	

### **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	<ul> <li>* Total is net of Indian Reserves</li> <li>** The quantity of parkland may be underestimate</li> </ul>				
Parks and protected greenspaces are important for the protection and enhancement of community carbon sinks.					
	2009				
	Area (ha)	%			
National Parks	125,851.3	6.4			
Provincial Parks / Protected Areas	636,528.2	32.2			
Agricultural Land Reserve	42,204.8	2.1			
Other land use	1,174,509.2	59.4			
Total Land Area	1,979,093.5	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 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 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.