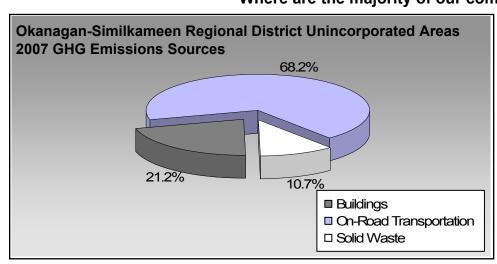
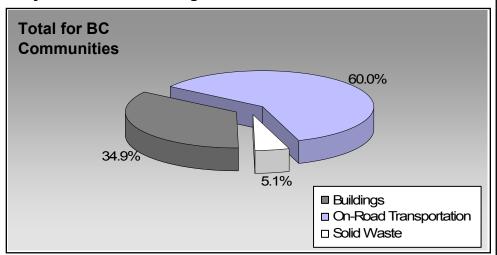


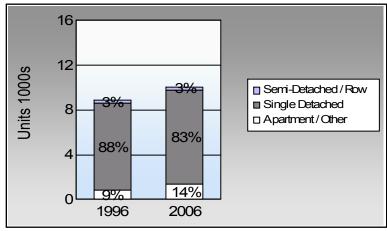
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

#### Where are the majority of our community's emissions coming from?





## Are we living more compactly? Housing Type



In BC, single family detached housing made up 49% of housing in 2006.

## Are we driving less? Commute To Work

	1996	2006
	84.2%	80.9%
	5.9%	9.4%
	0.5%	0.6%
<b>À</b>	6.6%	6.0%
<b>%</b>	1.7%	1.5%

In BC, 10% of people took transit, 7% walked, and 2% cycled to work in 2006.

#### **Residential Density**

This data is only available for municipalities.

BC municipal average: 7.4 people per net ha

## Are we living closer to where we work? Commute Distance

This data is currently unavailable in the CEEI 2007 Reports

In BC, 41% of people lived within 5km of their work in 2006.

For more information and to provide feedback on your Community Energy and Emissions Inventory (CEEI) Report see back page.



## **Sectors**

On Road Transport	ation	<u>Vehicles</u>	Consumption	Measurement	Average-VKT(km)	Energy (GJ)	<u>CO2e (t)</u>
Small Passenger Cars	Gasoline	3,516	4,285,404	Litres	11,741	149,989	10,307
	Diesel Fuel	177	153,528	Litres	12,056	5,880	419
	Other Fuel	0	0	Litres	0	-	-
				Small Pa	ssenger Cars	155,869	10,726
Large Passenger Cars	Gasoline	2,400	5,282,249	Litres	17,392	184,879	12,647
	Diesel Fuel	35	72,864	Litres	17,601	2,791	199
	Other Fuel	< 10	13,859	Litres	14,652	531	21
				Large Pa	assenger Cars	188,201	12,867
Light Trucks, Vans, SUVs	Gasoline	5,944	17,257,365	Litres	19,265	604,008	41,531
_	Diesel Fuel	707	1,654,518	Litres	18,918	63,368	4,519
	Other Fuel	64	150,654	Litres	13,242	5,770	231
				Light Tro	ucks, Vans, SUVs	673,146	46,281
Commercial Vehicles	Gasoline	76	286,625	Litres	12,983	10,032	668
	Diesel Fuel	112	453,780	Litres	20,404	17,380	1,221
	Other Fuel	11	38,928	Litres	11,809	1,491	60
				Commer	cial Vehicles	28,903	1,949
Tractor Trailer Trucks	Gasoline	< 10	16,262	Litres	15,366	569	38
	Diesel Fuel	144	3,267,149	Litres	74,666	125,132	8,792
	Other Fuel	< 10	3,571	Litres	7,085	137	5
				Tractor <sup>-</sup>	Trailer Trucks	125,838	8,835
Motorhomes	Gasoline	227	269,917	Litres	2,972	9,447	631
	Diesel Fuel	40	42,659	Litres	4,269	1,634	115
	Other Fuel	< 10	3,323	Litres	2,189	127	5
				Motorho	mes	11,208	751
Motorcycles, Mopeds	Gasoline	249	112,486	Litres	5,395	3,937	263
				Motorcy	cles, Mopeds	3,937	263
Bus	Gasoline	< 10	27,676	Litres	22,118	969	65
	Diesel Fuel	13	148,426	Litres	31,266	5,685	399
	Other Fuel	< 10	10,681	Litres	15,961	409	16
				Bus		7,063	480



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On Road Transportation Totals	All Fuels:	1,194,165	82,152
	Other Fuel:	8,465	338
	Diesel:	221,870	15,664
	Gasoline:	963,830	66,150

Buildings	<u>Type</u>	Connections	Consumption	Measurement	Energy (GJ)	<u>CO2e (t)</u>
Residential	Electricity	13,551	162,655,920	Kilowatt Hours	585,561	1,029
	Natural Gas	3,954	259,178	GigaJoules	259,178	13,217
	Heating Oil		62,050	GigaJoules	62,050	4,374
	Propane		109,401	GigaJoules	109,401	6,675
	Wood		546,599	GigaJoules	546,599	202
			Residential		1,562,789	25,497
Commercial/Small-Medium Industrial	Electricity	879		Kilowatt Hours	-	-
	Natural Gas	230		GigaJoules	-	-
			Commercial/Sma	III-Medium Industrial	-	-
			Electri	city:	585,561	1,029
			Natura	al Gas:	259,178	13,217
			Propa	ne:	109,401	6,675
			Wood		546,599	202
			Heatir	ig Oil:	62,050	4,374
Buildings Totals			Buildi	ngs:	1,562,789	25,497

Solid Waste		Mass (t)	CO2e (t)
	Community Solid Waste	17,150	12,892



Grand Total		CONSUMPTION		ENERGY (GJ)	CO2e (t)
	Diesel Fuel	5,792,924	L	221,870	15,664
	Electricity	162,655,920	kWh	585,561	1,029
	Gasoline	27,537,984	L	963,830	66,150
	Heating Oil	62,050	GJ	62,050	4,374
	Natural Gas	259,178	GJ	259,178	13,217
	Other Fuel	221,016	L	8,465	338
	Propane	109,401	GJ	109,401	6,675
	Solid Waste	17,150	T	0	12,892
	Wood	546,599	GJ	546,599	202
Total of Transportation / E	Buildings / Solid Waste:			<b>2,756,954</b> GJ	<b>120,541</b> tonnes

## **Memo Items**

Buildings	<u>Type</u>	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	3	48,694,950	Kilowatt Hours	175,302	292
	Natural Gas	4	withheld	GigaJoules	-	-
			Lar	ge Industrial	175,302	292





## **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="https://ceei/index.html">CEEIRPT@gov.bc.ca</a>

#### 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	3	
	Units	%	Units	%	Units	%	
Single Detached House	7,795	25	7,670	81	8,375	83	
Semi-Detached House	110	0	75	1	130	1	
Row House	125	0	160	2	150	1	
Apartment, Duplex	95	0	145	2	95	1	
Apartment, 5 storeys or higher	0	0	5	0	0	0	
Apartment, under 5 storeys	135	0	160	2	130	1	
Other Single Attached House	30	0	60	1	45	0	
Movable Dwelling	555	2	1,155	12	1,125	11	

#### 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	200	01	200	)6	
	People	%	People	%	People	%	
Car, Truck, Van as Driver	6,250	84	6,050	83	7,170	81	
Car, Truck, Van as Passenge	435	6	520	7	835	9	
Public Transit	35	0	20	0	50	1	
Walked	490	7	445	6	535	6	
Bicycle	125	2	95	1	135	2	
Motorcycle	10	0	30	0	15	0	
Taxicab	0	0	0	0	0	0	
Other Method	75	1	145	2	120	1	

#### **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.

200	6
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	136,973.0	14.8	
Local Parks	140.6	0.0	
Agricultural Land Reserve	80,076.6	8.6	
Other land use	709,469.1	76.6	
Total Land Area	926,659.3	100.0	



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### **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 CEEIRPT@gov.bc.ca (see survey on CEEI website).

#### **On-Road Transportation (and Land Use)**

Proximity to Transit Persons, dwelling units (du) and employment within 400m of a quality 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

**Energy Intensity** 

Floor Space

Average energy use per person per square metre of 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 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)



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# 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 (<a href="http://www.toolkit.bc.ca">http://www.toolkit.bc.ca</a>), 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 <a href="http://www.toolkit.bc.ca">http://www.cd.gov.bc.ca/lgd/greencommunities/targets.htm</a>.

#### 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="mailto:CEEIRPT@gov.bc.ca">CEEIRPT@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.