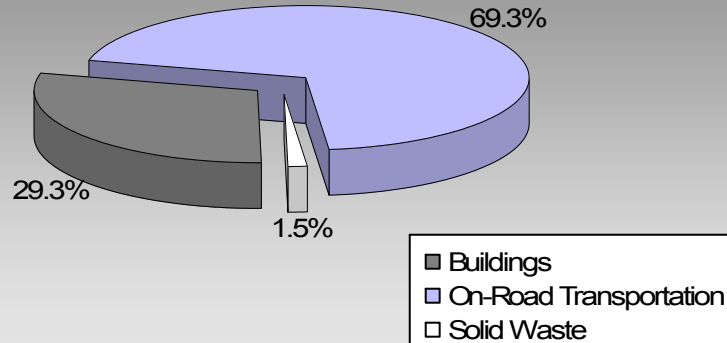


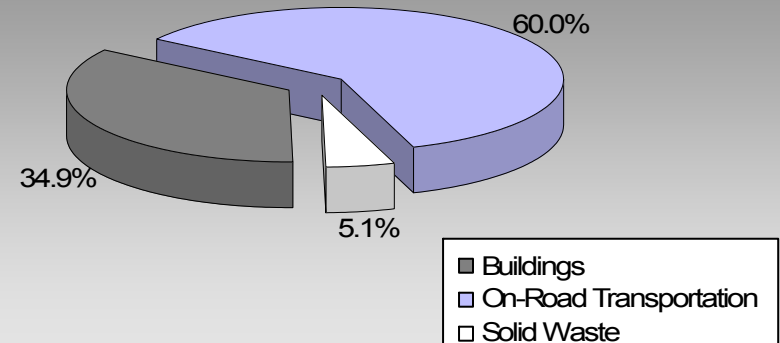
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

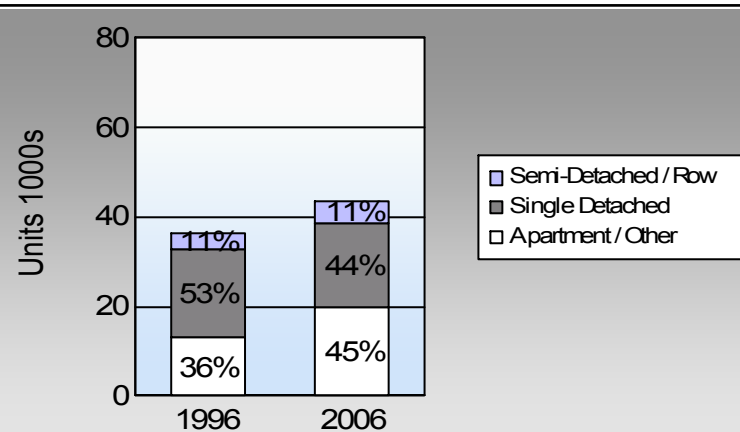
**Abbotsford City
2007 GHG Emissions Sources**



**Total for BC
Communities**








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

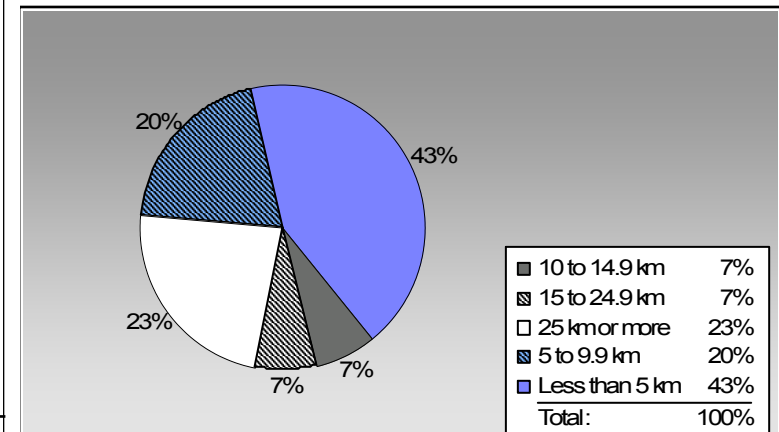
	1996	2006
	84.6%	82.7%
	9.0%	10.7%
	1.1%	1.4%
	3.4%	3.3%
	1.0%	0.8%

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

Residential Density

Abbotsford City: 14.4 people per net ha
BC municipal average: 7.4 people per net ha

Are we living closer to where we work? Commute Distance



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

Sectors

On Road Transportation		<u>Vehicles</u>	<u>Consumption</u>	<u>Measurement</u>	<u>Average-VKT(km)</u>	<u>Energy (GJ)</u>	<u>CO2e (t)</u>
Small Passenger Cars	Gasoline	26,169	38,523,776	Litres	14,940	1,348,332	91,768
	Diesel Fuel	825	952,631	Litres	15,664	36,486	2,602
	Other Fuel	< 10	8,001	Litres	12,372	306	12
Small Passenger Cars						1,385,124	94,382
Large Passenger Cars	Gasoline	13,316	30,303,927	Litres	18,746	1,060,637	71,861
	Diesel Fuel	292	741,518	Litres	18,741	28,400	2,024
	Other Fuel	24	62,997	Litres	16,040	2,413	97
Large Passenger Cars						1,091,450	73,982
Light Trucks, Vans, SUVs	Gasoline	28,641	90,594,214	Litres	21,416	3,170,797	216,331
	Diesel Fuel	1,989	5,507,935	Litres	20,971	210,954	15,048
	Other Fuel	134	382,255	Litres	14,412	14,640	586
Light Trucks, Vans, SUVs						3,396,391	231,965
Commercial Vehicles	Gasoline	175	755,293	Litres	14,326	26,435	1,767
	Diesel Fuel	850	4,048,397	Litres	21,143	155,054	10,894
	Other Fuel	34	148,078	Litres	12,654	5,671	227
Commercial Vehicles						187,160	12,888
Tractor Trailer Trucks	Gasoline	16	96,333	Litres	15,092	3,372	226
	Diesel Fuel	2,320	85,573,145	Litres	96,429	3,277,451	230,274
	Other Fuel	< 10	11,902	Litres	7,085	456	18
Tractor Trailer Trucks						3,281,279	230,518
Motorhomes	Gasoline	595	890,744	Litres	3,573	31,176	2,087
	Diesel Fuel	92	118,893	Litres	4,875	4,554	320
	Other Fuel	< 10	8,583	Litres	2,189	329	13
Motorhomes						36,059	2,420
Motorcycles, Mopeds	Gasoline	1,189	497,693	Litres	5,442	17,419	1,162
Motorcycles, Mopeds						17,419	1,162
Bus	Gasoline	99	903,625	Litres	21,111	31,627	2,125
	Diesel Fuel	111	1,882,219	Litres	32,059	72,089	5,065
	Other Fuel	< 10	48,719	Litres	15,936	1,866	75
Bus						105,582	7,265

Abbotsford City

Updated 2007 Community Energy and Emissions Inventory

	Gasoline:	5,689,795	387,327
	Diesel:	3,784,988	266,227
	Other Fuel:	25,681	1,028
On Road Transportation Totals	All Fuels:	9,500,464	654,582

Buildings	<u>Type</u>	<u>Connections</u>	<u>Consumption</u>	<u>Measurement</u>	<u>Energy (GJ)</u>	<u>CO2e (t)</u>	
Residential	Electricity	41,707	538,834,348	Kilowatt Hours	1,939,802	13,291	
	Natural Gas	28,209	2,686,216	GigaJoules	2,686,216	136,997	
Residential					4,626,018	150,288	
Commercial/Small-Medium Industrial	Electricity	5,525	503,929,269	Kilowatt Hours	1,814,144	12,430	
	Natural Gas	3,417	2,237,409	GigaJoules	2,237,409	114,108	
Commercial/Small-Medium Industrial					4,051,553	126,538	
					Electricity:	3,753,946	25,721
					Natural Gas:	4,923,625	251,105
					Propane:		
					Wood:		
					Heating Oil:		
Buildings Totals				Buildings:	8,677,571	276,826	

Solid Waste	<u>Mass (t)</u>	<u>CO2e (t)</u>
Community Solid Waste	70,413	13,786

Abbotsford City

Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION	ENERGY (GJ)	CO2e (t)
Diesel Fuel	98,824,738 L	3,784,988	266,227
Electricity	1,042,763,617 kWh	3,753,946	25,721
Gasoline	162,565,605 L	5,689,795	387,327
Natural Gas	4,923,625 GJ	4,923,625	251,105
Other Fuel	670,535 L	25,681	1,028
Solid Waste	70,413 T	0	13,786
Total of Transportation / Buildings / Solid Waste:		18,178,035 GJ	945,194 tonnes

Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	4	withheld	Kilowatt Hours	-	-
	Natural Gas	64	1,690,511	GigaJoules	1,690,511	86,216
Large Industrial					1,690,511	86,216

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

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.

	1996		2001		2006	
	Units	%	Units	%	Units	%
Single Detached House	19,480	35	20,785	52	19,050	44
Semi-Detached House	720	1	985	2	1,330	3
Row House	3,120	6	3,395	8	3,525	8
Apartment, Duplex	3,190	6	3,740	9	7,885	18
Apartment, 5 storeys or higher	920	2	870	2	1,070	2
Apartment, under 5 storeys	8,545	15	9,745	24	10,070	23
Other Single Attached House	45	0	40	0	30	0
Movable Dwelling	400	1	560	1	595	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	35,405	85	40,855	84	46,265	83
Car, Truck, Van as Passenger	3,750	9	4,460	9	5,980	11
Public Transit	440	1	555	1	780	1
Walked	1,430	3	1,815	4	1,870	3
Bicycle	415	1	485	1	465	1
Motorcycle	45	0	55	0	130	0
Taxicab	15	0	45	0	55	0
Other Method	360	1	315	1	425	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	
Population	135,866.0
Net Land Area (ha) *	9,452.9
Residential Density (people per net ha)	14.4

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 %
Less than 5 km	19,805 43
5 to 9.9 km	9,210 20
10 to 14.9 km	3,160 7
15 to 24.9 km	3,265 7
25 km or more	10,840 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	102.7	0.3
Local Parks	1,605.6	4.2
Agricultural Land Reserve	27,423.2	71.2
Other land use	9,374.8	24.4
Total Land Area	38,506.3	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 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
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 Energy Intensity	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 CO ₂ e 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 (<http://www.toolkit.bc.ca>), 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.

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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 <http://www.toolkit.bc.ca> and <http://www.cd.gov.bc.ca/lgd/greencommunities/targets.htm>.

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

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.