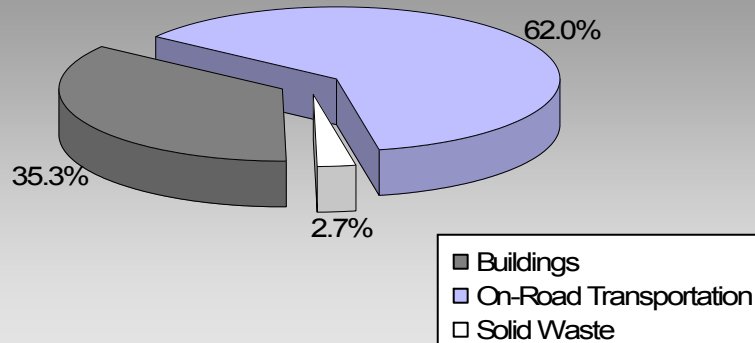


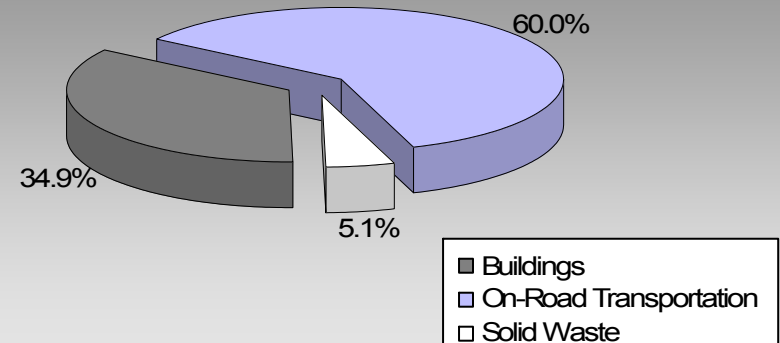
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

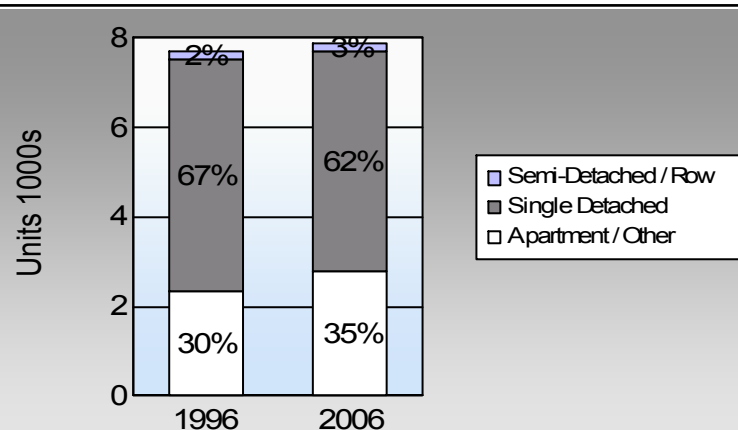
**Oak Bay District Municipality
2007 GHG Emissions Sources**



**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

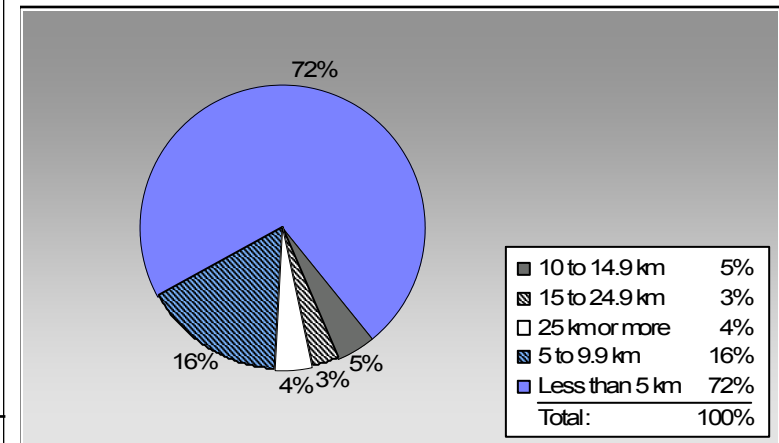
	1996	2006
	66.5%	60.9%
	7.0%	8.4%
	9.7%	9.4%
	6.3%	8.9%
	8.9%	10.4%

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

Residential Density

Oak Bay District Municipality: 20.2 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	4,525	4,732,726	Litres	10,666	165,645	11,314
	Diesel Fuel	132	106,346	Litres	11,272	4,073	290
	Other Fuel	< 10	851	Litres	7,041	33	1
Small Passenger Cars						169,751	11,605
Large Passenger Cars	Gasoline	2,409	3,412,901	Litres	12,093	119,452	8,124
	Diesel Fuel	53	69,329	Litres	11,690	2,655	189
	Other Fuel	< 10	5,848	Litres	10,937	224	9
Large Passenger Cars						122,331	8,322
Light Trucks, Vans, SUVs	Gasoline	3,380	5,733,044	Litres	12,161	200,657	13,694
	Diesel Fuel	75	119,473	Litres	12,568	4,576	326
	Other Fuel	< 10	12,922	Litres	9,559	495	20
Light Trucks, Vans, SUVs						205,728	14,040
Commercial Vehicles	Gasoline	< 10	25,405	Litres	12,186	889	60
	Diesel Fuel	10	43,653	Litres	17,840	1,672	117
	Other Fuel	< 10	4,891	Litres	9,665	187	7
Commercial Vehicles						2,748	184
Tractor Trailer Trucks	Diesel Fuel	15	310,303	Litres	57,569	11,885	835
Tractor Trailer Trucks						11,885	835
Motorhomes	Gasoline	103	86,368	Litres	2,697	3,023	202
	Diesel Fuel	< 10	7,497	Litres	3,756	287	20
	Other Fuel	< 10	1,523	Litres	2,189	58	2
Motorhomes						3,368	224
Motorcycles, Mopeds	Gasoline	256	86,595	Litres	5,473	3,031	202
Motorcycles, Mopeds						3,031	202
Bus	Gasoline	< 10	30,811	Litres	18,014	1,078	72
	Diesel Fuel	< 10	22,810	Litres	36,158	874	61
Bus						1,952	133

Oak Bay District Municipality

Updated 2007 Community Energy and Emissions Inventory

	Gasoline:	493,775	33,668
	Diesel:	26,022	1,838
	Other Fuel:	997	39
On Road Transportation Totals	All Fuels:	520,794	35,545

Buildings	<u>Type</u>	<u>Connections</u>	<u>Consumption</u>	<u>Measurement</u>	<u>Energy (GJ)</u>	<u>CO2e (t)</u>
Residential	Electricity	7,875	102,811,362	Kilowatt Hours	370,121	2,536
	Natural Gas	2,805	226,836	GigaJoules	226,836	11,568
	Heating Oil		66,348	GigaJoules	66,348	4,677
	Propane		11,466	GigaJoules	11,466	700
Residential					674,771	19,481
Commercial/Small-Medium Industrial	Electricity	533	30,299,196	Kilowatt Hours	109,077	747
	Natural Gas	155		GigaJoules	-	-
Commercial/Small-Medium Industrial					109,077	747
					Electricity:	3,283
					Natural Gas:	11,568
					Propane:	700
					Wood:	
					Heating Oil:	4,677
Buildings Totals					Buildings:	783,848
						20,228

Solid Waste	<u>Mass (t)</u>	<u>CO2e (t)</u>
Community Solid Waste	5,850	1,538

Oak Bay District Municipality

Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION		ENERGY (GJ)	CO2e (t)
Diesel Fuel	679,411	L	26,022	1,838
Electricity	133,110,558	kWh	479,198	3,283
Gasoline	14,107,850	L	493,775	33,668
Heating Oil	66,348	GJ	66,348	4,677
Natural Gas	226,836	GJ	226,836	11,568
Other Fuel	26,035	L	997	39
Propane	11,466	GJ	11,466	700
Solid Waste	5,850	T	0	1,538
Total of Transportation / Buildings / Solid Waste:			1,304,642 GJ	57,311 tonnes

Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	0	0	Kilowatt Hours	-	-
Large 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 <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	5,190	40	5,265	68	4,885	62
Semi-Detached House	100	1	90	1	105	1
Row House	90	1	115	1	110	1
Apartment, Duplex	220	2	220	3	565	7
Apartment, 5 storeys or higher	465	4	465	6	430	5
Apartment, under 5 storeys	1,615	13	1,580	20	1,785	23
Other Single Attached House	20	0	10	0	10	0
Movable Dwelling	0	0	0	0	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		2001		2006	
	People	%	People	%	People	%
Car, Truck, Van as Driver	4,495	67	4,290	65	4,445	61
Car, Truck, Van as Passenger	470	7	375	6	615	8
Public Transit	655	10	640	10	685	9
Walked	425	6	610	9	650	9
Bicycle	600	9	620	9	760	10
Motorcycle	50	1	25	0	65	1
Taxicab	10	0	0	0	0	0
Other Method	50	1	55	1	85	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	18,012.0
Net Land Area (ha) *	891.7
Residential Density (people per net ha)	20.2

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	4,860	72
5 to 9.9 km	1,070	16
10 to 14.9 km	305	5
15 to 24.9 km	190	3
25 km or more	295	4

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	7.8	0.7
Local Parks	59.1	5.6
Agricultural Land Reserve	88.7	8.4
Other land use	899.9	85.3
Total Land Area	1,055.5	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 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.