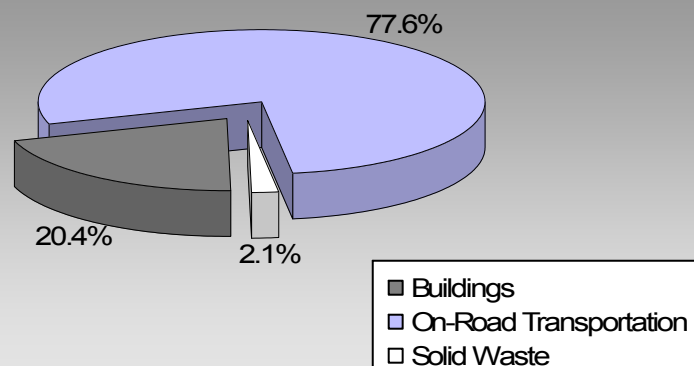


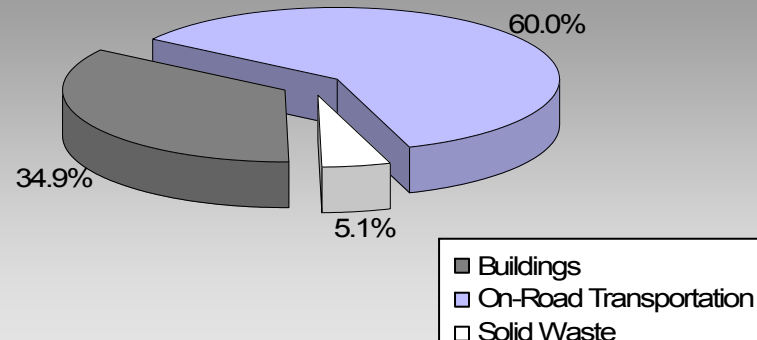
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

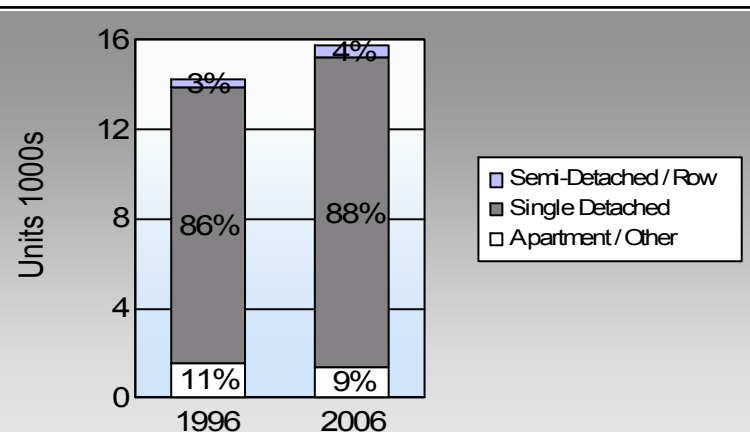
**Nanaimo Regional District Unincorporated Areas
2007 GHG Emissions Sources**



**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
	85.1%	83.8%
	5.3%	7.0%
	1.5%	1.5%
	4.5%	4.5%
	1.4%	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.

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	6,554	8,599,904	Litres	12,875	300,997	20,583
	Diesel Fuel	392	370,599	Litres	13,695	14,194	1,012
	Other Fuel	< 10	2,719	Litres	9,851	104	4
Small Passenger Cars						315,295	21,599
Large Passenger Cars	Gasoline	4,096	7,822,817	Litres	15,863	273,799	18,627
	Diesel Fuel	154	301,360	Litres	16,516	11,542	822
	Other Fuel	12	30,200	Litres	12,681	1,157	46
Large Passenger Cars						286,498	19,495
Light Trucks, Vans, SUVs	Gasoline	10,350	29,932,065	Litres	19,720	1,047,622	71,841
	Diesel Fuel	1,286	3,063,344	Litres	19,043	117,326	8,368
	Other Fuel	104	257,012	Litres	13,252	9,844	394
Light Trucks, Vans, SUVs						1,174,792	80,603
Commercial Vehicles	Gasoline	105	470,795	Litres	15,114	16,478	1,100
	Diesel Fuel	272	1,212,216	Litres	21,812	46,428	3,262
	Other Fuel	21	79,506	Litres	11,805	3,045	122
Commercial Vehicles						65,951	4,484
Tractor Trailer Trucks	Gasoline	< 10	45,836	Litres	17,013	1,604	108
	Diesel Fuel	337	9,051,511	Litres	80,324	346,673	24,357
	Other Fuel	< 10	4,761	Litres	8,226	182	7
Tractor Trailer Trucks						348,459	24,472
Motorhomes	Gasoline	342	364,066	Litres	2,947	12,742	851
	Diesel Fuel	35	39,032	Litres	4,762	1,495	105
	Other Fuel	< 10	5,676	Litres	2,220	217	9
Motorhomes						14,454	965
Motorcycles, Mopeds	Gasoline	508	197,137	Litres	5,354	6,900	460
Motorcycles, Mopeds						6,900	460
Bus	Gasoline	19	156,630	Litres	19,651	5,482	368
	Diesel Fuel	11	284,606	Litres	36,211	10,900	766
	Other Fuel	0	0	Litres	0	-	-
Bus						16,382	1,134

Nanaimo Regional District Unincorporated Areas Updated 2007 Community Energy and Emissions Inventory

On Road Transportation Totals	Gasoline:	1,665,624	113,938
	Diesel:	548,558	38,692
	Other Fuel:	14,549	582
	All Fuels:	2,228,731	153,212

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Residential	Electricity	19,255	320,730,681	Kilowatt Hours	1,154,630	7,911
	Natural Gas	335	17,740	GigaJoules	17,740	905
	Heating Oil		360,060	GigaJoules	360,060	25,381
	Propane		62,049	GigaJoules	62,049	3,786
	Wood		439,380	GigaJoules	439,380	163
Residential					2,033,859	38,146
Commercial/Small-Medium Industrial	Electricity	2,094	84,465,575	Kilowatt Hours	304,076	2,083
	Natural Gas	186		GigaJoules	-	-
Commercial/Small-Medium Industrial					304,076	2,083
Buildings Totals	Electricity:				1,458,706	9,994
	Natural Gas:				17,740	905
	Propane:				62,049	3,786
	Wood:				439,380	163
	Heating Oil:				360,060	25,381
Buildings:					2,337,935	40,229

Solid Waste	Mass (t)	CO2e (t)
Community Solid Waste	20,042	4,109

Nanaimo Regional District Unincorporated Areas Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION		ENERGY (GJ)	CO2e (t)
Diesel Fuel	14,322,668	L	548,558	38,692
Electricity	405,196,256	kWh	1,458,706	9,994
Gasoline	47,589,250	L	1,665,624	113,938
Heating Oil	360,060	GJ	360,060	25,381
Natural Gas	17,740	GJ	17,740	905
Other Fuel	379,874	L	14,549	582
Propane	62,049	GJ	62,049	3,786
Solid Waste	20,042	T	0	4,109
Wood	439,380	GJ	439,380	163
Total of Transportation / Buildings / Solid Waste:			4,566,666 GJ	197,550 tonnes

Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	0	0	Kilowatt Hours	-	-
	Natural Gas	0	0	GigaJoules	-	-
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	12,255	25	13,595	88	13,755	88
Semi-Detached House	230	0	285	2	365	2
Row House	135	0	160	1	190	1
Apartment, Duplex	140	0	160	1	275	2
Apartment, 5 storeys or higher	0	0	25	0	30	0
Apartment, under 5 storeys	130	0	120	1	110	1
Other Single Attached House	25	0	35	0	45	0
Movable Dwelling	1,300	3	1,130	7	950	6

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	11,290	85	11,720	86	11,980	84
Car, Truck, Van as Passenger	700	5	750	5	1,005	7
Public Transit	205	2	150	1	210	1
Walked	600	5	590	4	645	5
Bicycle	185	1	205	2	220	2
Motorcycle	25	0	40	0	50	0
Taxicab	0	0	0	0	0	0
Other Method	270	2	225	2	195	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.

2006
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.

	2009	
	Area (ha)	%
National Parks	0.0	0.0
Provincial Parks / Protected Areas	2,600.1	1.4
Local Parks	1,179.1	0.6
Agricultural Land Reserve	17,558.1	9.1
Other land use	171,961.5	89.0
Total Land Area	193,298.9	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.