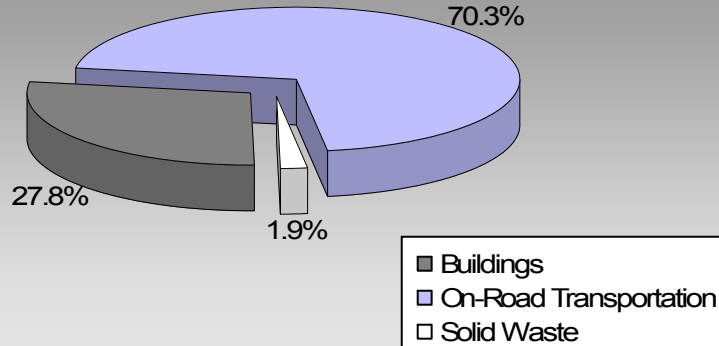


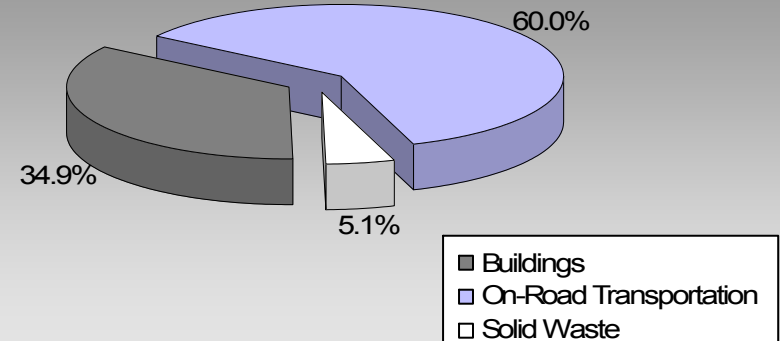
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

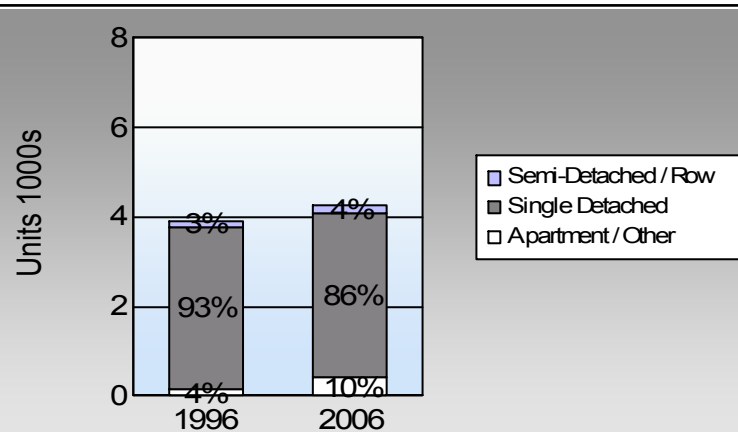
**North Saanich District Municipality  
2007 GHG Emissions Sources**



**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

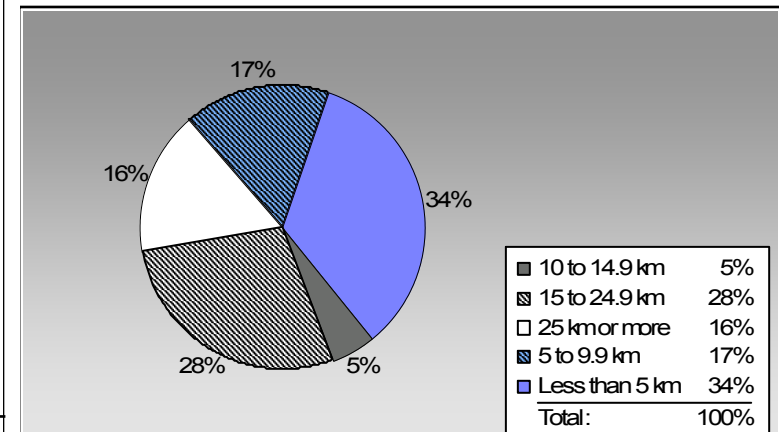
	1996	2006
	85.2%	81.1%
	4.9%	6.4%
	3.6%	3.1%
	2.1%	3.7%
	2.3%	2.6%

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

## Residential Density

North Saanich District Municipality:  
5.3 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

<b>On Road Transportation</b>		<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	2,721	2,904,743	Litres	10,745	101,666	6,943
	Diesel Fuel	154	122,430	Litres	11,327	4,689	334
	Other Fuel	< 10	1,278	Litres	7,680	49	2
<b>Small Passenger Cars</b>						<b>106,404</b>	<b>7,279</b>
Large Passenger Cars	Gasoline	1,663	2,380,489	Litres	12,056	83,317	5,662
	Diesel Fuel	59	88,487	Litres	12,902	3,389	241
	Other Fuel	< 10	2,300	Litres	10,730	88	4
<b>Large Passenger Cars</b>						<b>86,794</b>	<b>5,907</b>
Light Trucks, Vans, SUVs	Gasoline	3,497	5,835,199	Litres	11,825	204,232	13,948
	Diesel Fuel	248	434,943	Litres	14,091	16,658	1,188
	Other Fuel	13	21,901	Litres	9,093	839	34
<b>Light Trucks, Vans, SUVs</b>						<b>221,729</b>	<b>15,170</b>
Commercial Vehicles	Gasoline	22	72,162	Litres	11,400	2,526	169
	Diesel Fuel	55	191,326	Litres	15,847	7,328	515
	Other Fuel	< 10	2,777	Litres	8,694	106	4
<b>Commercial Vehicles</b>						<b>9,960</b>	<b>688</b>
Tractor Trailer Trucks	Gasoline	< 10	2,380	Litres	7,085	83	6
	Diesel Fuel	41	861,532	Litres	55,890	32,997	2,318
<b>Tractor Trailer Trucks</b>						<b>33,080</b>	<b>2,324</b>
Motorhomes	Gasoline	121	131,651	Litres	3,182	4,608	308
	Diesel Fuel	23	25,040	Litres	4,857	959	67
	Other Fuel	< 10	2,630	Litres	2,189	101	4
<b>Motorhomes</b>						<b>5,668</b>	<b>379</b>
Motorcycles, Mopeds	Gasoline	233	87,318	Litres	5,438	3,056	204
	<b>Motorcycles, Mopeds</b>						<b>3,056</b>
Bus	Gasoline	< 10	64,357	Litres	24,900	2,252	151
	Diesel Fuel	< 10	211,639	Litres	53,516	8,106	570
<b>Bus</b>						<b>10,358</b>	<b>721</b>

<b>On Road Transportation Totals</b>	Gasoline:	401,740	27,391
	Diesel:	74,126	5,233
	Other Fuel:	1,183	48
	<b>All Fuels:</b>	<b>477,049</b>	<b>32,672</b>

<b>Buildings</b>	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Residential	Electricity	4,615	106,868,503	Kilowatt Hours	384,726	2,636
	Natural Gas	638	41,434	GigaJoules	41,434	2,113
	Heating Oil		20,986	GigaJoules	20,986	1,479
	Propane		3,620	GigaJoules	3,620	221
<b>Residential</b>					<b>450,766</b>	<b>6,449</b>
Commercial/Small-Medium Industrial	Electricity	432	42,881,203	Kilowatt Hours	154,372	1,058
	Natural Gas	109	105,904	GigaJoules	105,904	5,401
<b>Commercial/Small-Medium Industrial</b>					<b>260,276</b>	<b>6,459</b>
<b>Buildings Totals</b>	Electricity:				539,098	3,694
	Natural Gas:				147,338	7,514
	Propane:				3,620	221
	Wood:					
	Heating Oil:				20,986	1,479
	<b>Buildings:</b>					<b>711,042</b>

<b>Solid Waste</b>	Mass (t)	CO2e (t)
Community Solid Waste	3,362	884

# North Saanich District Municipality

## Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION		ENERGY (GJ)	CO2e (t)
Diesel Fuel	1,935,397	L	74,126	5,233
Electricity	149,749,706	kWh	539,098	3,694
Gasoline	11,478,299	L	401,740	27,391
Heating Oil	20,986	GJ	20,986	1,479
Natural Gas	147,338	GJ	147,338	7,514
Other Fuel	30,886	L	1,183	48
Propane	3,620	GJ	3,620	221
Solid Waste	3,362	T	0	884
<b>Total of Transportation / Buildings / Solid Waste:</b>			<b>1,188,091 GJ</b>	<b>46,464 tonnes</b>

### Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	0	0	Kilowatt Hours	-	-
<b>Large Industrial</b>					-	-

## 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](mailto: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	3,635	48	3,745	92	3,675	86
Semi-Detached House	35	0	40	1	45	1
Row House	95	1	70	2	135	3
Apartment, Duplex	95	1	155	4	380	9
Apartment, 5 storeys or higher	0	0	5	0	0	0
Apartment, under 5 storeys	20	0	25	1	30	1
Other Single Attached House	10	0	10	0	5	0
Movable Dwelling	25	0	40	1	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	3,640	85	3,745	83	3,755	81
Car, Truck, Van as Passenger	210	5	225	5	295	6
Public Transit	155	4	240	5	145	3
Walked	90	2	110	2	170	4
Bicycle	100	2	75	2	120	3
Motorcycle	10	0	25	1	35	1
Taxicab	0	0	0	0	0	0
Other Method	70	2	75	2	110	2

### 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	11,021.0
Net Land Area (ha) *	2,090.2
Residential Density (people per net ha)	5.3

### 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	1,310	34
5 to 9.9 km	650	17
10 to 14.9 km	195	5
15 to 24.9 km	1,085	28
25 km or more	635	16

### 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	12.9	0.4
Provincial Parks / Protected Areas	134.0	3.6
Local Parks	98.6	2.7
Agricultural Land Reserve	1,381.1	37.1
Other land use	2,093.5	56.3
Total Land Area	3,720.0	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](mailto:CEEIRPT@gov.bc.ca) (see survey on CEEI website).

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### 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

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### Buildings

Residential; Public Building Energy Intensity	Average energy use per person per square metre of floor space
Floor Space	Average residential dwelling unit size

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### Solid Waste (and Water)

Waste Diversion	Tonnes of waste diverted
Avoided Waste Emissions	Tonnes of CO <sub>2</sub> e of avoided future emissions due to reduced waste since 2007
Water Use	Per capita residential water use

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### Land-Use Change

Impervious Surface Cover	% change in impervious surface cover
Tree Canopy Cover	% change in tree canopy cover

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### 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 (<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](mailto: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.