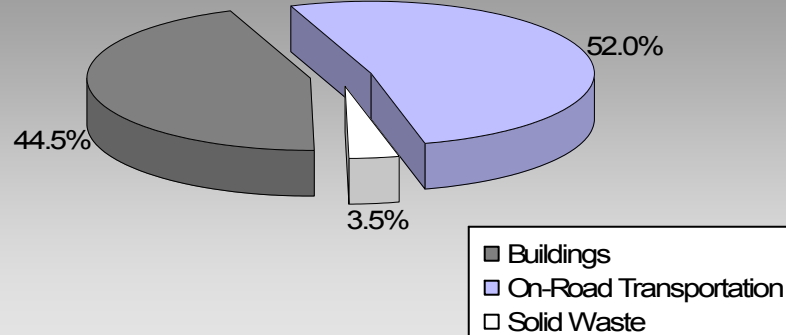


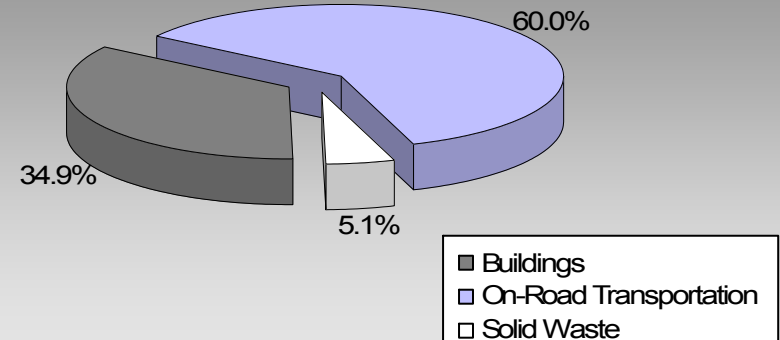
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

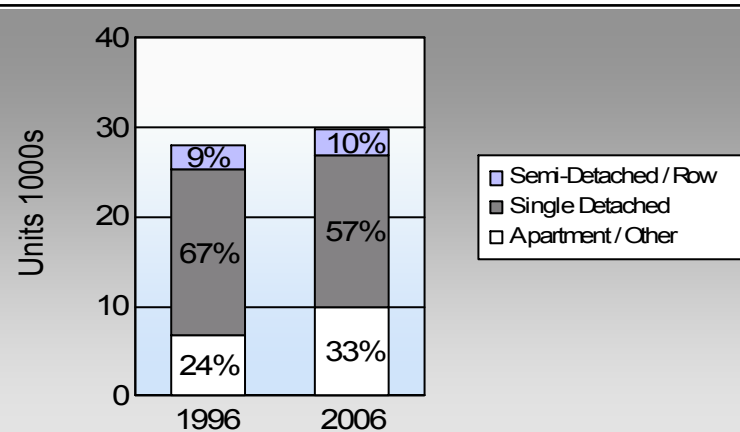
**North Vancouver District Municipality  
2007 GHG Emissions Sources**



**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

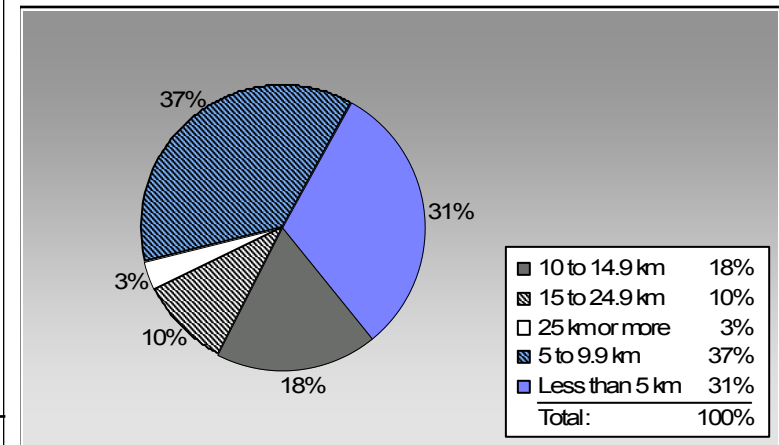
	1996	2006
	60.8%	77.4%
	7.3%	6.6%
	19.8%	10.0%
	9.4%	3.6%
	1.7%	1.4%

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

## Residential Density

North Vancouver District Municipality: 8.9 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	19,198	24,932,380	Litres	13,347	872,633	59,191	
	Diesel Fuel	460	461,020	Litres	13,606	17,657	1,259	
	Other Fuel	< 10	2,029	Litres	9,340	78	3	
<b>Small Passenger Cars</b>						<b>890,368</b>	<b>60,453</b>	
Large Passenger Cars	Gasoline	9,771	16,817,537	Litres	14,829	588,614	39,756	
	Diesel Fuel	156	256,300	Litres	13,096	9,816	699	
	Other Fuel	14	28,059	Litres	11,536	1,075	43	
<b>Large Passenger Cars</b>						<b>599,505</b>	<b>40,498</b>	
Light Trucks, Vans, SUVs	Gasoline	18,362	35,080,681	Litres	13,615	1,227,824	83,634	
	Diesel Fuel	555	1,189,229	Litres	16,558	45,547	3,249	
	Other Fuel	47	93,558	Litres	10,520	3,583	143	
<b>Light Trucks, Vans, SUVs</b>						<b>1,276,954</b>	<b>87,026</b>	
Commercial Vehicles	Gasoline	46	180,710	Litres	14,439	6,325	422	
	Diesel Fuel	231	1,090,959	Litres	21,668	41,784	2,936	
	Other Fuel	< 10	20,351	Litres	11,899	779	31	
<b>Commercial Vehicles</b>						<b>48,888</b>	<b>3,389</b>	
Tractor Trailer Trucks	Gasoline	< 10	15,416	Litres	22,941	540	36	
	Diesel Fuel	226	7,657,908	Litres	90,180	293,298	20,607	
	Other Fuel	< 10	7,001	Litres	10,418	268	11	
<b>Tractor Trailer Trucks</b>						<b>294,106</b>	<b>20,654</b>	
Motorhomes	Gasoline	314	296,413	Litres	3,055	10,374	693	
	Diesel Fuel	29	33,765	Litres	4,697	1,293	91	
	Other Fuel	< 10	2,215	Litres	2,189	85	3	
<b>Motorhomes</b>						<b>11,752</b>	<b>787</b>	
Motorcycles, Mopeds	Gasoline	771	308,195	Litres	5,624	10,787	719	
	<b>Motorcycles, Mopeds</b>						<b>10,787</b>	<b>719</b>
	Bus	Gasoline	29	317,442	Litres	25,607	11,110	747
Diesel Fuel		< 10	86,655	Litres	24,772	3,319	233	
Other Fuel		< 10	5,852	Litres		224	9	
<b>Bus</b>						<b>14,653</b>	<b>989</b>	

# North Vancouver District Municipality Updated 2007 Community Energy and Emissions Inventory

	Gasoline:	2,728,207	185,198
	Diesel:	412,714	29,074
	Other Fuel:	6,092	243
<b>On Road Transportation Totals</b>	<b>All Fuels:</b>	<b>3,147,013</b>	<b>214,515</b>

<b>Buildings</b>	<u>Type</u>	<u>Connections</u>	<u>Consumption</u>	<u>Measurement</u>	<u>Energy (GJ)</u>	<u>CO2e (t)</u>	
Residential	Electricity	27,006	309,609,391	Kilowatt Hours	1,114,593	7,637	
	Natural Gas	22,111	2,692,355	GigaJoules	2,692,355	137,310	
<b>Residential</b>					<b>3,806,948</b>	<b>144,947</b>	
Commercial/Small-Medium Industrial	Electricity	2,571	201,255,989	Kilowatt Hours	724,521	4,964	
	Natural Gas	1,303	665,753	GigaJoules	665,753	33,953	
<b>Commercial/Small-Medium Industrial</b>					<b>1,390,274</b>	<b>38,917</b>	
					Electricity:	1,839,114	12,601
					Natural Gas:	3,358,108	171,263
					Propane:		
					Wood:		
					Heating Oil:		
<b>Buildings Totals</b>	<b>Buildings:</b>				<b>5,197,222</b>	<b>183,864</b>	

<b>Solid Waste</b>	<u>Mass (t)</u>	<u>CO2e (t)</u>
Community Solid Waste	39,973	14,545

<b>Grand Total</b>	CONSUMPTION		ENERGY (GJ)	CO <sub>2</sub> e (t)
<b>Diesel Fuel</b>	10,775,836	L	412,714	29,074
<b>Electricity</b>	510,865,380	kWh	1,839,114	12,601
<b>Gasoline</b>	77,948,774	L	2,728,207	185,198
<b>Natural Gas</b>	3,358,108	GJ	3,358,108	171,263
<b>Other Fuel</b>	159,065	L	6,092	243
<b>Solid Waste</b>	39,973	T	0	14,545
<b>Total of Transportation / Buildings / Solid Waste:</b>			<b>8,344,235 GJ</b>	<b>412,924 tonnes</b>

### Memo Items

<b>Buildings</b>	Type	Connections	Consumption	Measurement	Energy (GJ)	CO <sub>2</sub> e (t)
Large Industrial	Electricity	4	withheld	Kilowatt Hours	-	-
	Natural Gas	26	withheld	GigaJoules	-	-
<b>Large Industrial</b>					<b>-</b>	<b>-</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	18,575	40	18,455	63	16,915	57
Semi-Detached House	480	1	415	1	475	2
Row House	2,115	5	2,275	8	2,495	8
Apartment, Duplex	2,110	5	3,200	11	4,645	16
Apartment, 5 storeys or higher	1,755	4	1,680	6	1,705	6
Apartment, under 5 storeys	2,830	6	3,035	10	3,485	12
Other Single Attached House	25	0	15	0	25	0
Movable Dwelling	15	0	10	0	5	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	13,195	61	14,745	65	29,245	77
Car, Truck, Van as Passenger	1,585	7	1,315	6	2,490	7
Public Transit	4,295	20	3,670	16	3,765	10
Walked	2,035	9	2,475	11	1,360	4
Bicycle	365	2	365	2	540	1
Motorcycle	15	0	70	0	150	0
Taxicab	30	0	45	0	10	0
Other Method	175	1	110	0	245	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	86,725.0
Net Land Area (ha) *	9,738.3
Residential Density (people per net ha)	8.9

### 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	10,460	31
5 to 9.9 km	12,430	37
10 to 14.9 km	6,195	18
15 to 24.9 km	3,380	10
25 km or more	1,115	3

### 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	2,442.8	14.9
Local Parks	2,687.8	16.4
Agricultural Land Reserve	0.0	0.0
Other land use	11,239.1	68.7
<b>Total Land Area</b>	<b>16,369.8</b>	<b>100.0</b>

## 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.