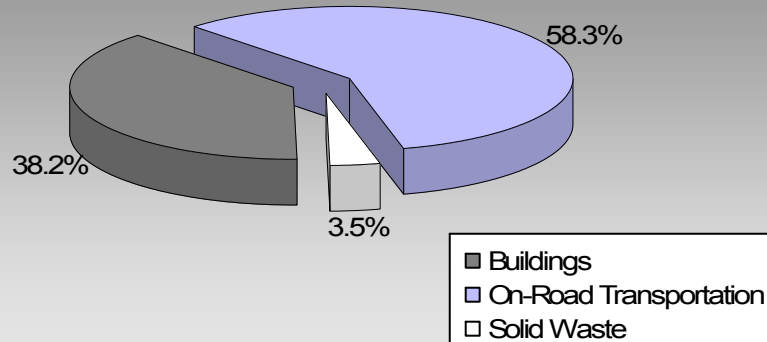


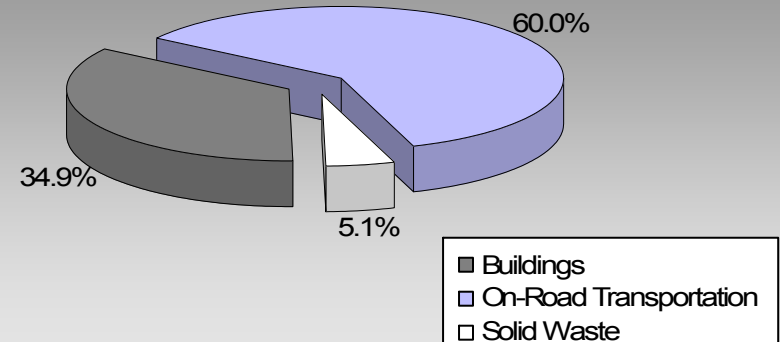
*BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities*

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

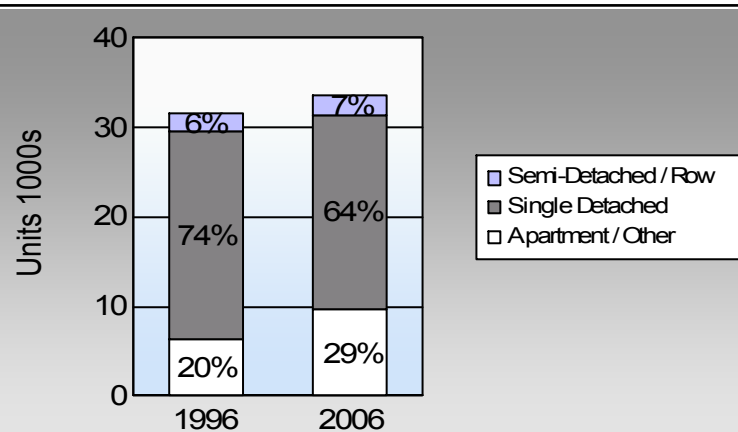
**Delta District Municipality  
2007 GHG Emissions Sources**



**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

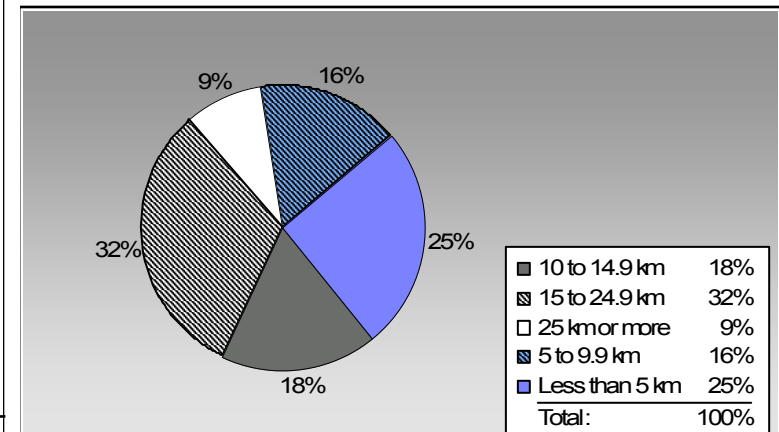
	1996	2006
	80.5%	78.0%
	5.8%	7.4%
	8.8%	9.1%
	3.3%	3.7%
	0.9%	0.7%

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

### Residential Density

Delta District Municipality: 16.9 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	21,668	28,239,373	Litres	13,264	988,378	67,215	
	Diesel Fuel	484	497,585	Litres	13,666	19,058	1,359	
	Other Fuel	< 10	6,274	Litres	10,053	240	10	
<b>Small Passenger Cars</b>						<b>1,007,676</b>	<b>68,584</b>	
Large Passenger Cars	Gasoline	11,988	20,787,824	Litres	14,572	727,574	49,282	
	Diesel Fuel	324	567,918	Litres	13,916	21,751	1,550	
	Other Fuel	27	45,754	Litres	11,228	1,752	70	
<b>Large Passenger Cars</b>						<b>751,077</b>	<b>50,902</b>	
Light Trucks, Vans, SUVs	Gasoline	22,928	43,795,812	Litres	13,466	1,532,853	104,627	
	Diesel Fuel	1,176	2,578,861	Litres	16,862	98,770	7,045	
	Other Fuel	118	207,589	Litres	10,593	7,951	318	
<b>Light Trucks, Vans, SUVs</b>						<b>1,639,574</b>	<b>111,990</b>	
Commercial Vehicles	Gasoline	126	630,766	Litres	16,464	22,077	1,478	
	Diesel Fuel	713	3,736,720	Litres	21,730	143,116	10,055	
	Other Fuel	22	77,913	Litres	13,103	2,984	119	
<b>Commercial Vehicles</b>						<b>168,177</b>	<b>11,652</b>	
Tractor Trailer Trucks	Gasoline	29	183,194	Litres	17,179	6,412	430	
	Diesel Fuel	1,509	51,171,458	Litres	88,521	1,959,867	137,700	
	Other Fuel	< 10	19,303	Litres	8,207	739	30	
<b>Tractor Trailer Trucks</b>						<b>1,967,018</b>	<b>138,160</b>	
Motorhomes	Gasoline	484	775,699	Litres	3,997	27,149	1,819	
	Diesel Fuel	75	78,004	Litres	4,754	2,988	210	
	Other Fuel	10	7,061	Litres	2,189	270	11	
<b>Motorhomes</b>						<b>30,407</b>	<b>2,040</b>	
Motorcycles, Mopeds	Gasoline	872	354,999	Litres	5,305	12,425	829	
	<b>Motorcycles, Mopeds</b>						<b>12,425</b>	<b>829</b>
	Bus	Gasoline	40	398,829	Litres	22,519	13,959	937
Diesel Fuel		140	3,947,334	Litres	51,862	151,183	10,622	
Other Fuel		< 10	8,778	Litres	15,902	336	13	
<b>Bus</b>						<b>165,478</b>	<b>11,572</b>	

# Delta District Municipality

## Updated 2007 Community Energy and Emissions Inventory

	Gasoline:	3,330,827	226,617
	Diesel:	2,396,733	168,541
	Other Fuel:	14,272	571
<b>On Road Transportation Totals</b>	<b>All Fuels:</b>	<b>5,741,832</b>	<b>395,729</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	32,493	361,214,350	Kilowatt Hours	1,300,371	8,910	
	Natural Gas	26,162	2,940,027	GigaJoules	2,940,027	149,942	
	Heating Oil		51,437	GigaJoules	51,437	3,626	
	Propane		76,116	GigaJoules	76,116	4,644	
<b>Residential</b>					<b>4,367,951</b>	<b>167,122</b>	
Commercial/Small-Medium Industrial	Electricity	4,150	594,711,676	Kilowatt Hours	2,140,960	14,670	
	Natural Gas	2,456	1,513,861	GigaJoules	1,513,861	77,207	
<b>Commercial/Small-Medium Industrial</b>					<b>3,654,821</b>	<b>91,877</b>	
					Electricity:	3,441,331	23,580
					Natural Gas:	4,453,888	227,149
					Propane:	76,116	4,644
					Wood:		
					Heating Oil:	51,437	3,626
<b>Buildings Totals</b>	<b>Buildings:</b>				<b>8,022,772</b>	<b>258,999</b>	

<b>Solid Waste</b>	<u>Mass (t)</u>	<u>CO2e (t)</u>
Community Solid Waste	65,593	23,867

# Delta District Municipality

## Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION		ENERGY (GJ)	CO2e (t)
Diesel Fuel	62,577,880	L	2,396,733	168,541
Electricity	955,926,026	kWh	3,441,331	23,580
Gasoline	95,166,496	L	3,330,827	226,617
Heating Oil	51,437	GJ	51,437	3,626
Natural Gas	4,453,888	GJ	4,453,888	227,149
Other Fuel	372,672	L	14,272	571
Propane	76,116	GJ	76,116	4,644
Solid Waste	65,593	T	0	23,867
<b>Total of Transportation / Buildings / Solid Waste:</b>			<b>13,764,604 GJ</b>	<b>678,595 tonnes</b>

### Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	16	withheld	Kilowatt Hours	-	-
	Natural Gas	65	4,681,066	GigaJoules	4,681,066	238,734
<b>Large Industrial</b>					<b>4,681,066</b>	<b>238,734</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	23,210	42	23,360	71	21,590	64
Semi-Detached House	870	2	780	2	825	2
Row House	1,110	2	1,375	4	1,415	4
Apartment, Duplex	1,890	3	2,370	7	4,320	13
Apartment, 5 storeys or higher	275	1	200	1	400	1
Apartment, under 5 storeys	3,950	7	4,495	14	4,750	14
Other Single Attached House	110	0	40	0	40	0
Movable Dwelling	75	0	170	1	205	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	36,715	81	37,685	83	35,865	78
Car, Truck, Van as Passenger	2,645	6	2,735	6	3,380	7
Public Transit	4,025	9	3,155	7	4,190	9
Walked	1,520	3	1,310	3	1,680	4
Bicycle	395	1	425	1	300	1
Motorcycle	50	0	50	0	115	0
Taxicab	0	0	35	0	25	0
Other Method	235	1	230	1	450	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	99,862.0
Net Land Area (ha) *	5,900.9
Residential Density (people per net ha)	16.9

### 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	9,950	25
5 to 9.9 km	6,400	16
10 to 14.9 km	6,930	18
15 to 24.9 km	12,465	32
25 km or more	3,430	9

### 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	253.7	1.3
Local Parks	2,632.5	13.6
Agricultural Land Reserve	9,475.9	49.0
Other land use	6,979.3	36.1
<b>Total Land Area</b>	<b>19,341.3</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.