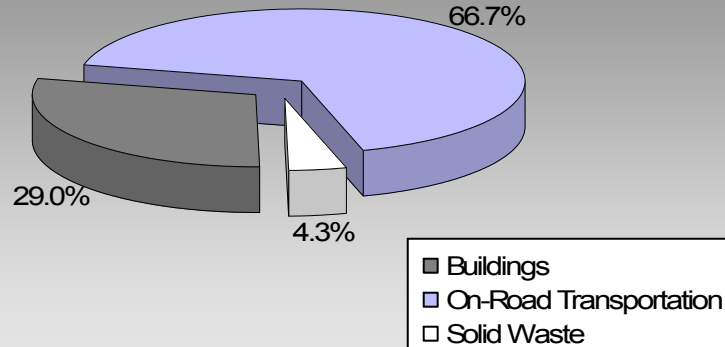


BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

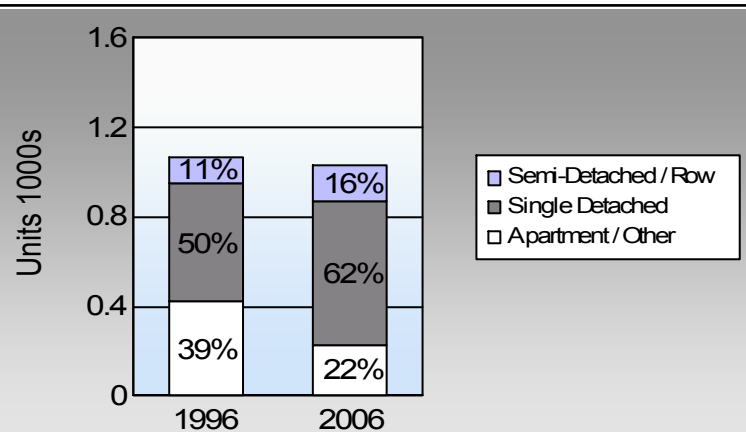
Chetwynd District Municipality
2007 GHG Emissions Sources



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
	75.6%	68.8%
	11.5%	16.9%
	0.7%	1.5%
	9.0%	11.4%
	0.7%	0.7%

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

Residential Density

Chetwynd District Municipality: 1.7 people per net ha
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	399	618,377	Litres	15,257	21,643	1,456
	Diesel Fuel	29	32,053	Litres	16,358	1,228	88
	Other Fuel	< 10	1,313	Litres	12,386	50	2
Small Passenger Cars						22,921	1,546
Large Passenger Cars	Gasoline	298	758,303	Litres	21,007	26,541	1,788
	Diesel Fuel	12	38,009	Litres	21,813	1,456	104
	Other Fuel	< 10	5,134	Litres	14,829	197	8
Large Passenger Cars						28,194	1,900
Light Trucks, Vans, SUVs	Gasoline	1,226	4,244,193	Litres	21,483	148,547	10,086
	Diesel Fuel	270	798,314	Litres	23,604	30,575	2,181
	Other Fuel	19	44,837	Litres	12,521	1,717	69
Light Trucks, Vans, SUVs						180,839	12,336
Commercial Vehicles	Gasoline	19	92,196	Litres	16,370	3,227	216
	Diesel Fuel	96	500,830	Litres	24,482	19,182	1,348
	Other Fuel	< 10	7,533	Litres	11,875	289	12
Commercial Vehicles						22,698	1,576
Tractor Trailer Trucks	Gasoline	< 10	22,661	Litres	19,348	793	53
	Diesel Fuel	148	5,409,926	Litres	93,976	207,200	14,558
	Other Fuel	< 10	595	Litres		23	1
Tractor Trailer Trucks						208,016	14,612
Motorhomes	Gasoline	27	36,094	Litres	3,116	1,263	84
	Diesel Fuel	< 10	335	Litres		13	1
	Other Fuel	< 10	1,384	Litres	2,189	53	2
Motorhomes						1,329	87
Motorcycles, Mopeds	Gasoline	17	14,041	Litres	6,322	491	33
Motorcycles, Mopeds						491	33
Bus	Gasoline	< 10	17,556	Litres	15,902	614	41
	Diesel Fuel	17	119,090	Litres	16,540	4,561	320
Bus						5,175	361

Chetwynd District Municipality

Updated 2007 Community Energy and Emissions Inventory

	Gasoline:	203,119	13,757
	Diesel:	264,215	18,600
	Other Fuel:	2,329	94
On Road Transportation Totals	All Fuels:	469,663	32,451

Buildings	<u>Type</u>	<u>Connections</u>	<u>Consumption</u>	<u>Measurement</u>	<u>Energy (GJ)</u>	<u>CO2e (t)</u>
Residential	Electricity	1,270	12,234,273	Kilowatt Hours	44,043	302
	Natural Gas	874	85,386	GigaJoules	85,386	4,355
	Heating Oil		1,933	GigaJoules	1,933	136
	Propane		5,247	GigaJoules	5,247	320
	Wood			14,349	GigaJoules	14,349
Residential					150,958	5,118
Commercial/Small-Medium Industrial	Electricity	311	20,382,366	Kilowatt Hours	73,376	503
	Natural Gas	199	165,996	GigaJoules	165,996	8,466
Commercial/Small-Medium Industrial					239,372	8,969
					Electricity:	805
					Natural Gas:	12,821
					Propane:	320
					Wood:	5
					Heating Oil:	136
Buildings Totals	Buildings:				390,330	14,087

Solid Waste	<u>Mass (t)</u>	<u>CO2e (t)</u>
Community Solid Waste	2,584	2,079

Chetwynd District Municipality

Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION		ENERGY (GJ)	CO2e (t)
Diesel Fuel	6,898,557	L	264,215	18,600
Electricity	32,616,639	kWh	117,419	805
Gasoline	5,803,421	L	203,119	13,757
Heating Oil	1,933	GJ	1,933	136
Natural Gas	251,382	GJ	251,382	12,821
Other Fuel	60,796	L	2,329	94
Propane	5,247	GJ	5,247	320
Solid Waste	2,584	T	0	2,079
Wood	14,349	GJ	14,349	5
Total of Transportation / Buildings / Solid Waste:			859,993 GJ	48,617 tonnes

Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	4	withheld	Kilowatt Hours	-	-
	Natural Gas	4	withheld	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	530	33	620	61	640	62
Semi-Detached House	55	3	35	3	45	4
Row House	60	4	60	6	115	11
Apartment, Duplex	10	1	0	0	0	0
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	275	17	220	22	180	17
Other Single Attached House	10	1	5	0	5	0
Movable Dwelling	125	8	80	8	45	4

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	1,055	76	770	72	935	69
Car, Truck, Van as Passenger	160	11	105	10	230	17
Public Transit	10	1	10	1	20	1
Walked	125	9	155	14	155	11
Bicycle	10	1	10	1	10	1
Motorcycle	0	0	0	0	0	0
Taxicab	0	0	0	0	0	0
Other Method	35	3	20	2	10	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	2,676.0
Net Land Area (ha) *	1,590.0
Residential Density (people per net ha)	1.7

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	0.0	0.0
Local Parks	34.3	0.6
Agricultural Land Reserve	322.5	5.2
Other land use	5,799.1	94.2
Total Land Area	6,155.9	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.