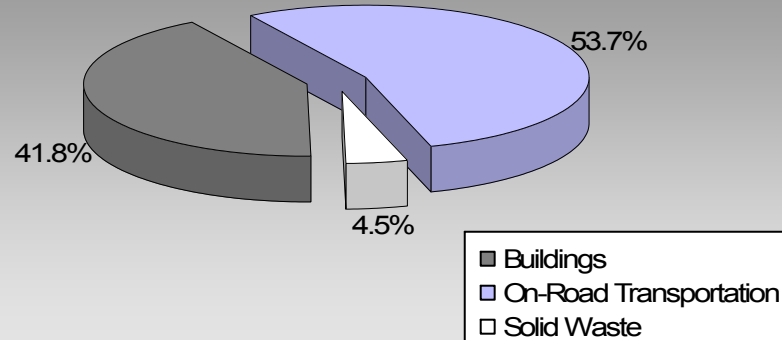


BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

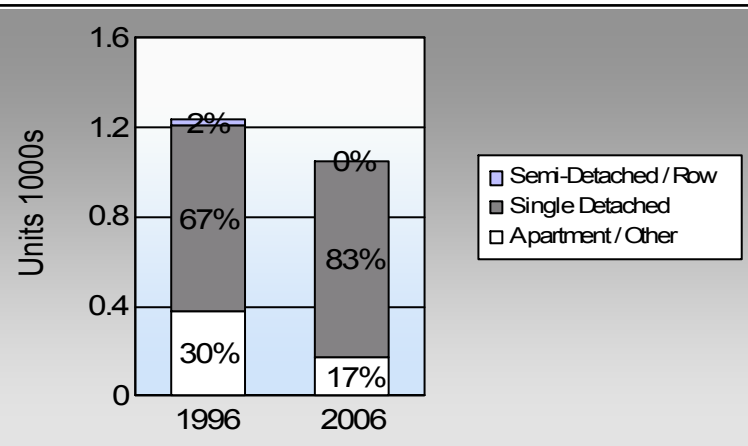
**Tumbler Ridge District Municipality
2007 GHG Emissions Sources**



**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
	59.0%	63.4%
	29.8%	14.9%
	0.0%	2.1%
	9.9%	8.9%
	0.0%	2.5%

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

Residential Density

Tumbler Ridge District Municipality:
0.8 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	231	356,465	Litres	14,650	12,476	845
	Diesel Fuel	< 10	10,256	Litres	14,647	393	28
Small Passenger Cars						12,869	873
Large Passenger Cars	Gasoline	149	366,583	Litres	18,518	12,830	871
	Diesel Fuel	< 10	8,156	Litres	24,539	312	22
Large Passenger Cars						13,142	893
Light Trucks, Vans, SUVs	Gasoline	787	2,523,701	Litres	19,912	88,330	6,030
	Diesel Fuel	172	473,154	Litres	22,021	18,122	1,293
	Other Fuel	< 10	23,621	Litres	13,739	905	36
Light Trucks, Vans, SUVs						107,357	7,359
Commercial Vehicles	Gasoline	< 10	12,929	Litres	11,356	453	30
	Diesel Fuel	37	191,119	Litres	24,332	7,320	514
	Other Fuel	< 10	1,437	Litres		55	2
Commercial Vehicles						7,828	546
Tractor Trailer Trucks	Diesel Fuel	35	1,175,778	Litres	83,792	45,032	3,164
Tractor Trailer Trucks						45,032	3,164
Motorhomes	Gasoline	21	29,262	Litres	2,906	1,024	68
	Diesel Fuel	< 10	2,131	Litres	2,810	82	6
	Other Fuel	< 10	1,384	Litres		53	2
Motorhomes						1,159	76
Motorcycles, Mopeds	Gasoline	< 10	6,435	Litres		225	15
Motorcycles, Mopeds						225	15
						Gasoline:	7,859
						Diesel:	5,027
						Other Fuel:	40
On Road Transportation Totals						All Fuels:	12,926

Tumbler Ridge District Municipality

Updated 2007 Community Energy and Emissions Inventory

Buildings	<u>Type</u>	<u>Connections</u>	<u>Consumption</u>	<u>Measurement</u>	<u>Energy (GJ)</u>	<u>CO2e (t)</u>
Residential	Electricity	1,475	11,761,622	Kilowatt Hours	42,342	290
	Natural Gas	1,076	83,108	GigaJoules	83,108	4,239
	Heating Oil		10,054	GigaJoules	10,054	709
	Propane		27,256	GigaJoules	27,256	1,663
	Wood		74,745	GigaJoules	74,745	28
Residential					237,505	6,929
Commercial/Small-Medium Industrial	Electricity	160	21,456,013	Kilowatt Hours	77,242	529
	Natural Gas	72	50,776	GigaJoules	50,776	2,590
Commercial/Small-Medium Industrial					128,018	3,119
					Electricity:	819
					Natural Gas:	6,829
					Propane:	1,663
					Wood:	28
					Heating Oil:	709
Buildings Totals					Buildings:	10,048
					365,523	3,119

Solid Waste	<u>Mass (t)</u>	<u>CO2e (t)</u>
Community Solid Waste	1,336	1,075

Tumbler Ridge District Municipality

Updated 2007 Community Energy and Emissions Inventory

Grand Total	CONSUMPTION	ENERGY (GJ)	CO2e (t)
Diesel Fuel	1,860,594 L	71,261	5,027
Electricity	33,217,635 kWh	119,584	819
Gasoline	3,295,375 L	115,338	7,859
Heating Oil	10,054 GJ	10,054	709
Natural Gas	133,884 GJ	133,884	6,829
Other Fuel	26,442 L	1,013	40
Propane	27,256 GJ	27,256	1,663
Solid Waste	1,336 T	0	1,075
Wood	74,745 GJ	74,745	28
Total of Transportation / Buildings / Solid Waste:		553,135 GJ	24,049 tonnes

Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	2	withheld	Kilowatt Hours	-	-
	Natural Gas	1	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	830	40	520	74	870	83
Semi-Detached House	10	0	5	1	0	0
Row House	20	1	15	2	0	0
Apartment, Duplex	0	0	0	0	0	0
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	145	7	35	5	0	0
Other Single Attached House	0	0	0	0	0	0
Movable Dwelling	230	11	130	18	175	17

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	1,130	59	595	66	745	63
Car, Truck, Van as Passenger	570	30	160	18	175	15
Public Transit	0	0	10	1	25	2
Walked	190	10	115	13	105	9
Bicycle	0	0	25	3	30	3
Motorcycle	0	0	0	0	0	0
Taxicab	10	1	0	0	0	0
Other Method	15	1	0	0	95	8

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	2,450.0
Net Land Area (ha) *	3,073.8
Residential Density (people per net ha)	0.8

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	10.0	0.0
Agricultural Land Reserve	0.0	0.0
Other land use	157,748.7	100.0
Total Land Area	157,758.7	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.