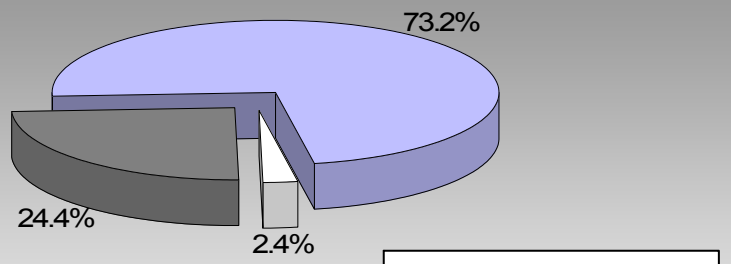
Bulkley-Nechako Regional District
Updated 2007 Community Energy and Emissions Inventory

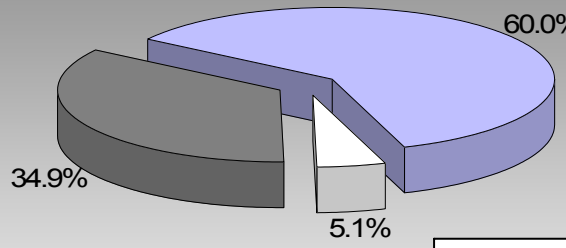
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

Bulkley-Nechako Regional District
2007 GHG Emissions Sources

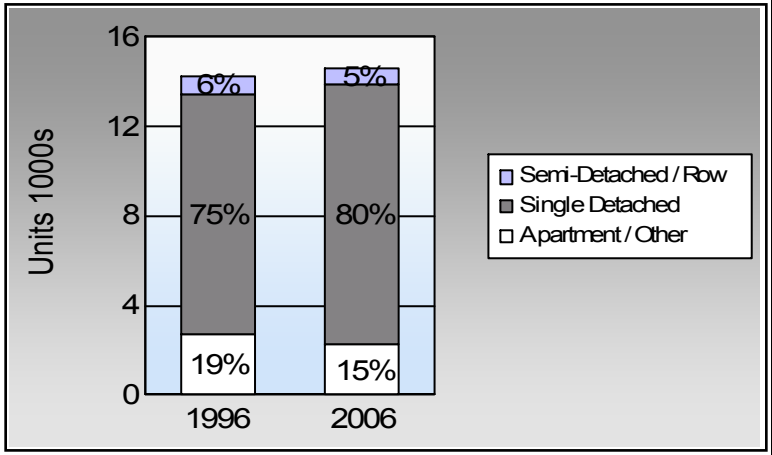


Total for BC Communities



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
	76.9%	78.4%
	9.0%	8.6%
	0.2%	0.3%
	10.8%	9.4%
	1.8%	1.1%

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

Residential Density

This data is only available for municipalities.

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.

For more information and to provide feedback on your Community Energy and Emissions Inventory (CEEI) Report see back page.

Sectors

On Road Transportation		Vehicles	Consumption	Measurement	Average-VKT(km)	Energy (GJ)	CO2e (t)
Small Passenger Cars	Gasoline	4,596	6,664,885	Litres	13,568	233,271	15,888
	Diesel Fuel	253	276,851	Litres	14,088	10,603	756
	Other Fuel	< 10	784	Litres		30	1
				Small Passenger Cars		**243,904**	**16,645**
Large Passenger Cars	Gasoline	3,107	7,885,195	Litres	19,892	275,982	18,724
	Diesel Fuel	80	225,116	Litres	19,666	8,622	614
	Other Fuel	11	31,164	Litres	15,115	1,194	48
				Large Passenger Cars		**285,798**	**19,386**
Light Trucks, Vans, SUVs	Gasoline	12,621	40,688,241	Litres	20,028	1,424,088	97,423
	Diesel Fuel	2,844	7,900,623	Litres	20,935	302,594	21,585
	Other Fuel	124	335,125	Litres	13,868	12,835	513
				Light Trucks, Vans, SUVs		**1,739,517**	**119,521**
Commercial Vehicles	Gasoline	185	858,262	Litres	14,320	30,039	2,006
	Diesel Fuel	579	2,694,860	Litres	20,735	103,213	7,252
	Other Fuel	22	75,400	Litres	11,464	2,888	116
				Commercial Vehicles		**136,140**	**9,374**
Tractor Trailer Trucks	Gasoline	20	126,809	Litres	15,899	4,438	297
	Diesel Fuel	1,055	33,242,072	Litres	78,153	1,273,171	89,453
	Other Fuel	< 10	1,785	Litres		68	3
				Tractor Trailer Trucks		**1,277,677**	**89,753**
Motorhomes	Gasoline	140	257,173	Litres	2,739	9,001	600
	Diesel Fuel	23	36,541	Litres	4,481	1,400	98
	Other Fuel	< 10	9,691	Litres	2,189	371	15
				Motorhomes		**10,772**	**713**
Motorcycles, Mopeds	Gasoline	130	98,857	Litres	5,081	3,460	231
				Motorcycles, Mopeds		**3,460**	**231**
Bus	Gasoline	30	268,147	Litres	19,987	9,385	629
	Diesel Fuel	77	653,053	Litres	19,329	25,012	1,757
	Other Fuel	17	111,629	Litres	15,917	4,275	171
				Bus		**38,672**	**2,557**

	Gasoline:	1,989,664	135,798
	Diesel:	1,724,615	121,515
	Other Fuel:	21,661	867
On Road Transportation Totals	**All Fuels:**	**3,735,940**	**258,180**

Buildings

	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Residential	Electricity	18,144	225,144,494	Kilowatt Hours	810,520	5,554
	Natural Gas	8,000	599,941	GigaJoules	599,941	30,597
	Heating Oil		98,502	GigaJoules	98,502	6,943
	Propane		274,683	GigaJoules	274,683	16,758
	Wood		731,131	GigaJoules	731,131	271
			Residential		**2,514,777**	**60,123**
Commercial/Small-Medium Industrial	Electricity	3,211	156,724,564	Kilowatt Hours	564,208	3,866
	Natural Gas	1,385	423,421	GigaJoules	423,421	21,594
	Propane	11	5,757	GigaJoules	5,757	351
			Commercial/Small-Medium Industrial		**993,386**	**25,811**

	Electricity:	1,374,728	9,420
	Natural Gas:	1,023,362	52,191
	Propane:	280,440	17,109
	Wood:	731,131	271
	Heating Oil:	98,502	6,943
Buildings Totals	**Buildings:**	**3,508,163**	**85,934**

Solid Waste

	Mass (t)	CO2e (t)
Community Solid Waste	19,273	8,523

Bulkley-Nechako Regional District
Updated 2007 Community Energy and Emissions Inventory

Grand Total

	CONSUMPTION		ENERGY (GJ)	CO2e (t)
Diesel Fuel	45,029,116	L	1,724,615	121,515
Electricity	381,869,058	kWh	1,374,728	9,420
Gasoline	56,847,569	L	1,989,664	135,798
Heating Oil	98,502	GJ	98,502	6,943
Natural Gas	1,023,362	GJ	1,023,362	52,191
Other Fuel	565,578	L	21,661	867
Propane	280,440	GJ	280,440	17,109
Solid Waste	19,273	T	0	8,523
Wood	731,131	GJ	731,131	271
Total of Transportation / Buildings / Solid Waste:			**7,244,103** GJ	**352,637** tonnes

Memo Items

Buildings

	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Electricity	13	752,522,749	Kilowatt Hours	2,709,080	18,562
	Natural Gas	15	911,059	GigaJoules	911,059	46,464
				Large Industrial	**3,620,139**	**65,026**

Agriculture

		Number of Animals	Methane	CO2e (t)
	Enteric Fermentation	85,069	5,224	109,704

Land-Use Change

		Area (ha)	CO2e (t)
Deforestation from	Settlement	86	41,588
Deforestation from	Agriculture	251	114,594
	Deforestation:	**337**	**156,182**

Bulkley-Nechako Regional District
Updated 2007 Community Energy and Emissions Inventory

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	10,665	43	11,680	79	11,625	80
Semi-Detached House	185	1	235	2	285	2
Row House	625	3	530	4	420	3
Apartment, Duplex	110	0	145	1	135	1
Apartment, 5 storeys or higher	0	0	15	0	5	0
Apartment, under 5 storeys	1,175	5	890	6	940	6
Other Single Attached House	40	0	35	0	90	1
Movable Dwelling	1,430	6	1,300	9	1,055	7

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
This data is currently unavailable in the CEEI 2007 Reports.

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	13,000	77	13,160	79	12,960	78
Car, Truck,Van as Passenge	1,525	9	1,390	8	1,415	9
Public Transit	40	0	55	0	55	0
Walked	1,830	11	1,670	10	1,560	9
Bicycle	300	2	195	1	185	1
Motorcycle	0	0	35	0	10	0
Taxicab	10	0	30	0	10	0
Other Method	200	1	205	1	340	2

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	1,081,127.1	13.8
Local Parks	212.8	0.0
Agricultural Land Reserve	473,477.5	6.1
Other land use	6,256,335.3	80.1
Total Land Area	7,811,152.7	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 CO2e 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