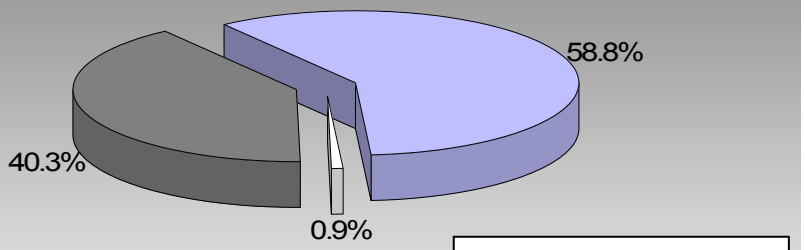
Nelson City
Updated 2007 Community Energy and Emissions Inventory

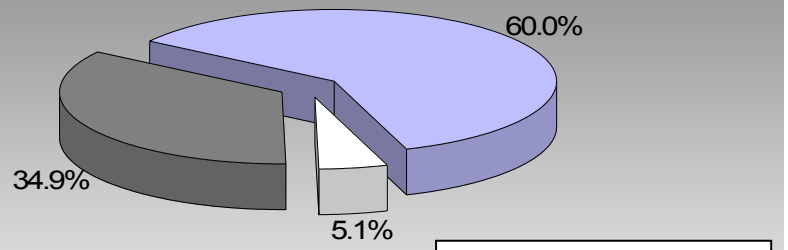
BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities

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

Nelson City
2007 GHG Emissions Sources

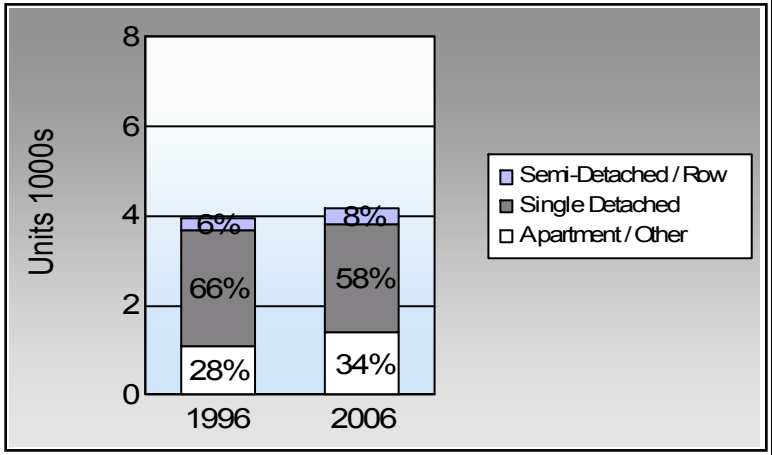


Total for BC Communities



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
	60.9%	58.4%
	10.4%	8.0%
	1.7%	1.6%
	24.2%	27.0%
	1.2%	3.6%

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

Residential Density

Nelson City: 8.3 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.

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	1,857	2,533,770	Litres	13,459	88,682	6,078
	Diesel Fuel	72	67,410	Litres	12,801	2,582	184
				Small Passenger Cars		**91,264**	**6,262**
Large Passenger Cars	Gasoline	836	1,737,676	Litres	16,444	60,819	4,139
	Diesel Fuel	24	59,818	Litres	16,081	2,291	163
	Other Fuel	< 10	7,401	Litres	13,469	283	11
				Large Passenger Cars		**63,393**	**4,313**
Light Trucks, Vans, SUVs	Gasoline	2,794	8,363,842	Litres	19,539	292,734	20,080
	Diesel Fuel	164	386,864	Litres	18,233	14,817	1,057
	Other Fuel	31	80,336	Litres	14,258	3,077	123
				Light Trucks, Vans, SUVs		**310,628**	**21,260**
Commercial Vehicles	Gasoline	31	139,181	Litres	14,293	4,871	325
	Diesel Fuel	49	205,280	Litres	19,826	7,862	552
	Other Fuel	< 10	16,636	Litres	12,564	637	25
				Commercial Vehicles		**13,370**	**902**
Tractor Trailer Trucks	Gasoline	< 10	4,761	Litres	7,085	167	11
	Diesel Fuel	71	2,015,383	Litres	76,031	77,189	5,423
	Other Fuel	< 10	2,380	Litres	7,085	91	4
				Tractor Trailer Trucks		**77,447**	**5,438**
Motorhomes	Gasoline	58	63,253	Litres	2,705	2,214	148
	Diesel Fuel	< 10	3,033	Litres	3,139	116	8
	Other Fuel	< 10	138	Litres		5	-
				Motorhomes		**2,335**	**156**
Motorcycles, Mopeds	Gasoline	145	64,402	Litres	5,078	2,254	150
				Motorcycles, Mopeds		**2,254**	**150**
Bus	Gasoline	< 10	25,947	Litres	24,779	908	61
	Diesel Fuel	< 10	207,886	Litres	44,411	7,962	559
	Other Fuel	< 10	7,315	Litres	15,902	280	11
				Bus		**9,150**	**631**

	Gasoline:	452,649	30,992
	Diesel:	112,819	7,946
	Other Fuel:	4,373	174
On Road Transportation Totals	**All Fuels:**	**569,841**	**39,112**

Buildings

	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Residential	Electricity	4,565	44,201,201	Kilowatt Hours	159,124	133
	Natural Gas	3,045	260,062	GigaJoules	260,062	13,263
	Heating Oil		10,287	GigaJoules	10,287	725
	Propane		18,140	GigaJoules	18,140	1,107
			Residential		**447,613**	**15,228**
Commercial/Small-Medium Industrial	Electricity	947	49,590,205	Kilowatt Hours	178,525	149
	Natural Gas	448	225,093	GigaJoules	225,093	11,480
			Commercial/Small-Medium Industrial		**403,618**	**11,629**

	Electricity:	337,649	282
	Natural Gas:	485,155	24,743
	Propane:	18,140	1,107
	Wood:		
	Heating Oil:	10,287	725
Buildings Totals	**Buildings:**	**851,231**	**26,857**

Solid Waste

	Mass (t)	CO2e (t)
Community Solid Waste	4,840	604

Grand Total		CONSUMPTION		ENERGY (GJ)	CO2e (t)
	Diesel Fuel	2,945,674	L	112,819	7,946
	Electricity	93,791,406	kWh	337,649	282
	Gasoline	12,932,832	L	452,649	30,992
	Heating Oil	10,287	GJ	10,287	725
	Natural Gas	485,155	GJ	485,155	24,743
	Other Fuel	114,206	L	4,373	174
	Propane	18,140	GJ	18,140	1,107
	Solid Waste	4,840	T	0	604
Total of Transportation / Buildings / Solid Waste:				**1,421,072** GJ	**66,573** tonnes

Memo Items

Buildings	Type	Connections	Consumption	Measurement	Energy (GJ)	CO2e (t)
Large Industrial	Natural Gas	2	withheld	GigaJoules	-	-
				Large Industrial	**-**	**-**

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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	2,590	40	2,525	62	2,425	58
Semi-Detached House	130	2	165	4	185	4
Row House	115	2	160	4	140	3
Apartment, Duplex	310	5	380	9	415	10
Apartment, 5 storeys or higher	95	1	30	1	0	0
Apartment, under 5 storeys	690	11	755	19	900	22
Other Single Attached House	0	0	10	0	0	0
Movable Dwelling	0	0	40	1	90	2

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	9,938.0
Net Land Area (ha) *	1,200.6
Residential Density (people per net ha)	8.3

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	2,465	61	2,175	56	2,445	58
Car, Truck,Van as Passenge	420	10	260	7	335	8
Public Transit	70	2	85	2	65	2
Walked	980	24	1,165	30	1,130	27
Bicycle	50	1	125	3	150	4
Motorcycle	10	0	30	1	15	0
Taxicab	0	0	40	1	10	0
Other Method	50	1	25	1	40	1

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	1.0	0.1
Local Parks	17.9	1.1
Agricultural Land Reserve	0.1	0.0
Other land use	1,597.3	98.8
Total Land Area	1,616.3	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