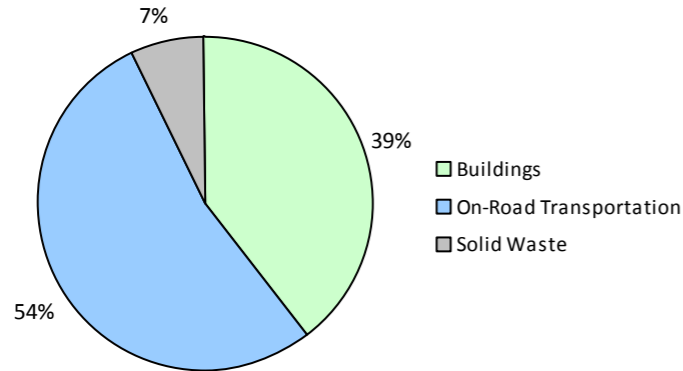
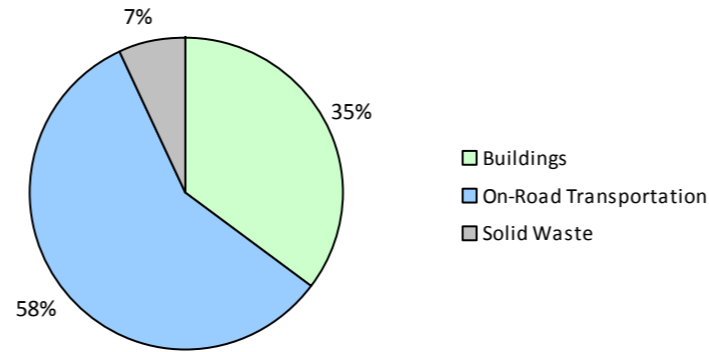


Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

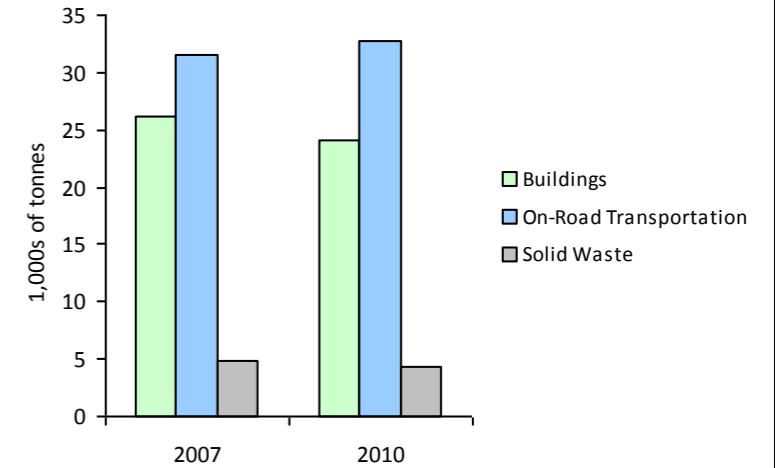
2010 GHG Emissions Sources (Total for this Community)



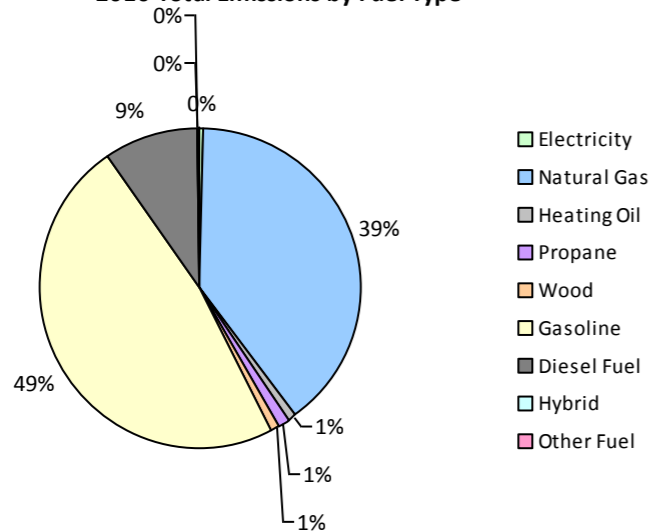
2010 GHG Emissions Sources (Total for BC)



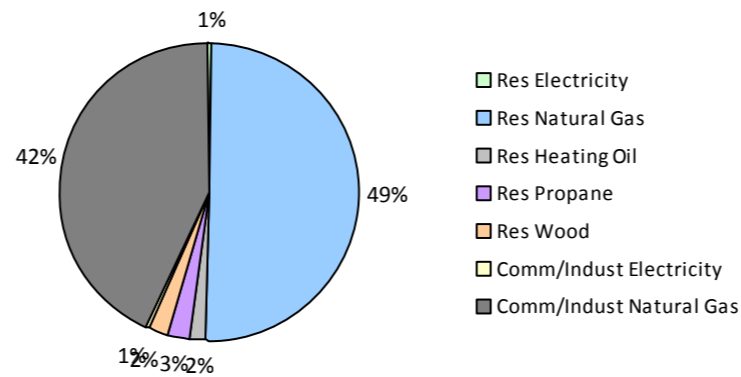
GHG Emissions Comparisons for this Community



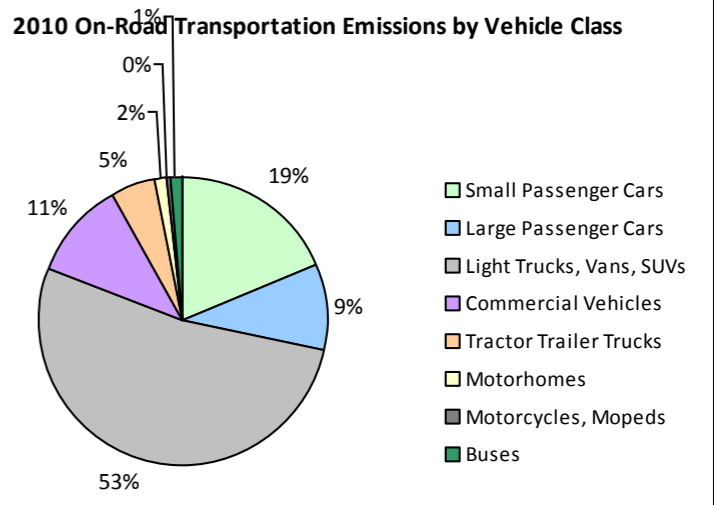
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



Nelson City 2010 Community Energy and Emissions Inventory

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Core Items

On-Road Transportation		2007					2010				
		Connections	Consumption	Avg VKT (km)	Energy (GJ)	CO2e (t)	Connections	Consumption	Avg VKT (km)	Energy (GJ)	CO2e (t)
Small Passenger Cars	Hybrid			21,300	136	9			22,200	191	11
	Gasoline	1,715	2,440,780 L	15,200	85,427	5,829	1,839	2,627,805 L	15,300	91,973	5,919
	Diesel Fuel	64	93,819 L	21,400	3,593	257	67	101,659 L	22,100	3,894	271
Large Passenger Cars	Hybrid			23,800	195	13	20	25,741 L	22,200	900	58
	Gasoline	820	1,352,952 L	14,600	47,353	3,215	806	1,328,532 L	14,700	46,499	2,984
	Diesel Fuel	15	15,965 L	10,800	612	44	23	25,834 L	11,700	990	68
	Other Fuel			8,100	55	4					
Light Trucks, Vans, SUVs	Hybrid			28,000	457	31	15	28,019 L	22,900	981	63
	Gasoline	2,661	6,572,471 L	16,800	230,037	15,753	2,918	7,254,478 L	17,100	253,907	16,469
	Diesel Fuel	110	229,377 L	11,900	8,785	624	93	222,005 L	14,300	8,503	588
	Other Fuel	24	49,111 L	12,500	1,243	76	18	33,448 L	11,000	847	51
Commercial Vehicles	Hybrid							30,200	124	8	
	Gasoline	129	395,081 L	17,900	13,828	928	197	628,860 L	18,700	22,009	1,406
	Diesel Fuel	159	559,779 L	19,100	21,440	1,506	212	837,629 L	21,900	32,081	2,187
	Other Fuel	10	23,743 L	12,800	600	36		13,200	538	33	
Tractor Trailer Trucks	Gasoline							120,300	1,013	66	
	Diesel Fuel	51	857,585 L	38,800	32,846	2,308	70	597,166 L	21,800	22,873	1,559
Motorhomes	Gasoline	47	125,715 L	18,700	4,400	292	46	121,432 L	18,700	4,251	269
	Diesel Fuel	29	86,409 L	16,700	3,310	232	29	90,010 L	17,100	3,447	234
	Other Fuel							13,600	53	2	
Motorcycles, Mopeds	Gasoline	157	35,337 L	4,900	1,236	83	174	44,652 L	5,600	1,562	100
Buses	Gasoline			14,900	174	11		18,500	120	8	
	Diesel Fuel	29	121,518 L	15,400	4,653	327	28	156,662 L	40,900	6,000	410
	Other Fuel			11,600	54	4					
Totals		6,020	12,959,642 L	15,933	460,434	31,582	6,555	12,959,642 L	16,366	502,756	32,764

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Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Residential	Wood	N/A	23,146 GJ	23,146	469	N/A	22,279 GJ	22,279	451
	Heating Oil	N/A	5,970 GJ	5,970	421	N/A	5,746 GJ	5,746	393
	Propane	N/A	10,527 GJ	10,527	642	N/A	10,133 GJ	10,133	618
	Natural Gas	3,045	260,062 GJ	260,062	13,044	3,058	238,345 GJ	238,345	11,955
	Electricity	4,568	44,251,282 kWh	159,304	133	4,743	45,325,445 kWh	163,171	136
Commercial/Small-Medium Industrial	Natural Gas	448	225,093 GJ	225,093	11,291	435	208,150 GJ	208,150	10,441
	Electricity	949	49,618,617 kWh	178,627	149	944	46,087,228 kWh	165,914	138
Totals		9,010		862,729	26,149	9,180		813,738	24,132

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Community Solid Waste	Solid Waste	0	4,827 t	N/A	4,901	0	6,433 t	N/A	4,409
Totals		0			4,901	0			4,409

Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Large Industrial	Natural Gas	2		0	0	2		0	0
Totals		2			0	2			0

Nelson City 2010 Community Energy and Emissions Inventory

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Totals for Transportation, Buildings and Solid Waste

Fuel Type	2007 (Population: 9,474)			2010 (Population: 9,794)		
	Consumption	Energy (GJ)	CO ₂ e (t)	Consumption	Energy (GJ)	CO ₂ e (t)
Hybrid	0 L	788	53	53,760 L	2,196	140
Gasoline	10,922,336 L	382,455	26,111	12,005,759 L	421,334	27,221
Diesel Fuel	1,964,452 L	75,239	5,298	2,030,965 L	77,788	5,317
Other Fuel	72,854 L	1,952	120	33,448 L	1,438	86
Wood	23,146 GJ	23,146	469	22,279 GJ	22,279	451
Heating Oil	5,970 GJ	5,970	421	5,746 GJ	5,746	393
Propane	10,527 GJ	10,527	642	10,133 GJ	10,133	618
Natural Gas	485,155 GJ	485,155	24,335	446,495 GJ	446,495	22,396
Electricity	93,869,899 kWh	337,931	282	91,412,673 kWh	329,085	274
Solid Waste	4,827 t	0	4,901	6,433 t	0	4,409
Grand Totals		1,323,163	62,632		1,316,494	61,305

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

Supporting Indicators

No new supporting indicator data have been provided in the 2010 reports. Work is currently underway to produce a complete second round of data for the indicators below in the 2012 reports (available in 2014). In the interim, we are including the same supporting indicator data that was provided in the 2007 reports. Feedback is requested on all supporting indicators; please contact us directly at

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

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	
	Units	%	Units	%	Units	%
Car, Truck, Van as Driver	2,465	61	2,175	56	2,445	58
Car, Truck, Van as Passenger	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

Parks and Protected Greenspace

Parks and protected greenspaces are important for the protection and enhancement of community carbon sinks.

	2009	
	Units	%
National Parks	0	0
Provincial Parks / Protected Areas	1	0
Local Parks	18	1
Agricultural Land Reserve	0	0
Other land use	1,597	99
Total Parks and Protected Area	19	1
Total Land Area	1,616	100

* Total is net of Indian Reserves
 ** Quantity of parkland may be underestimated

Residential Density

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	
	Units	%
National Parks	0	0
Provincial Parks / Protected Areas	1	0
Local Parks	18	1
Agricultural Land Reserve	0	0
Other land use	1,597	99
Total Parks and Protected Area	19	1
Total Land Area	1,616	100

* Net of Crown land, parks, Indian Reserves, water features, airports, ALR, waste disposal site

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Supporting Indicators Under Consideration

Work is currently underway to produce a complete second round of supporting indicators for the 2012 reports (available in 2014). These reports will new data for the five supporting indicators included in the 2007 and 2010 Reports:

- **Housing Type:** Private dwellings by structural type
- **Commute to Work:** Employed labour force - by mode of commute
- **Commute Distance**
- **Residential Density**
- **Parks and Protected Greenspace**

And in addition, the 2012 reports we are working to be able to include:

- **Proximity to Transit**
- **Building Energy Intensity**
- **Building Floor Space**
- **Waste Diversion**

We are continuing to work towards reporting on even more supporting indicators in the future including:

- **Proximity to Services** (e.g. destinations such as grocery store, school, other retail etc.)
- **Transit Ridership**
- **Water Use**
- **Impervious Surface Cover:** % change in impervious surface cover
- **Tree Canopy Cover:** % change in tree canopy cover
- **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)

Please give us feedback by contacting us directly at CEEIRPT@gov.bc.ca

Many local governments have been undertaking a significant amount of climate action in both the corporate and community-wide spheres, as demonstrated in both the public reports from the Climate Action Revenue Incentive Program (CARIP) <http://www.cscd.gov.bc.ca/lgd/greencommunities/carip.htm>, and on the <http://toolkit.bc.ca> website. These two resources may be helpful to those who are interested in learning from other BC local governments. The toolkit also contains additional information and resources including decision-support/planning frameworks and tools for undertaking actions to reduce GHG emissions and energy consumption.

This is your local government's 2010 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 as well as supporting indicators 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, fulfill Milestone One requirements for those local government members of the Federation of Canadian Municipalities' (FCM's) Partners in Climate Protection (PCP) program, as well as supporting local government efforts to monitor progress towards Regional Growth Strategy objectives.

A first in North America!

CEEI is a first in North America and a first step for BC communities. The 2010 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 from large industrial buildings, including updated land-use change and new agricultural sectors as 'memo items'. 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.

For More Information

The full list of all BC local government 2010 CEEI Reports, User Guide, Technical Methods and Guidance Document, and additional information on the Supporting 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, please take the time to 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,