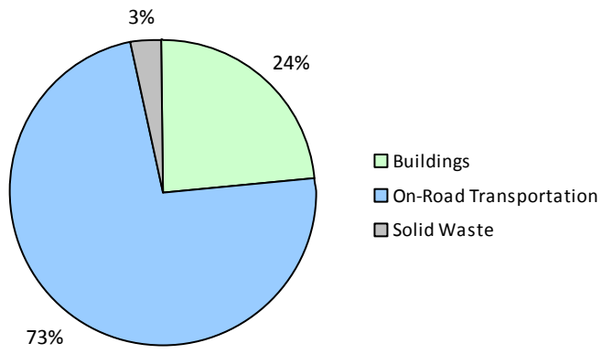
Thompson-Nicola Regional District Unincorporated Areas

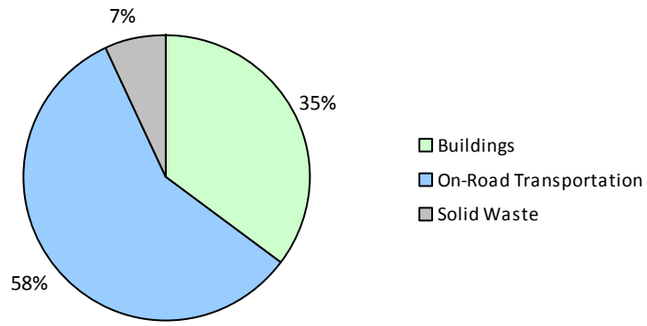
2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

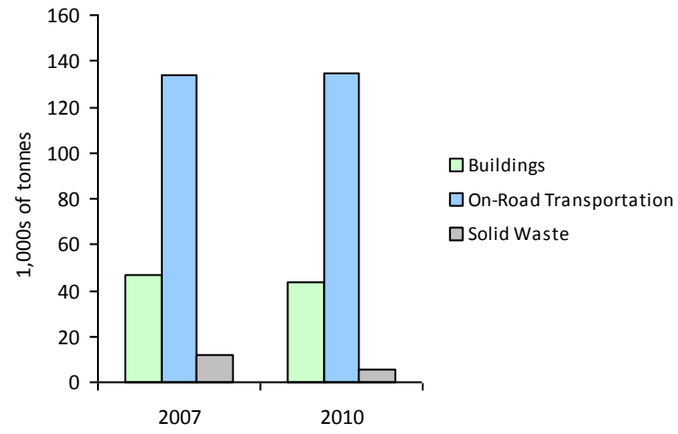
2010 GHG Emissions Sources (Total for this Community)



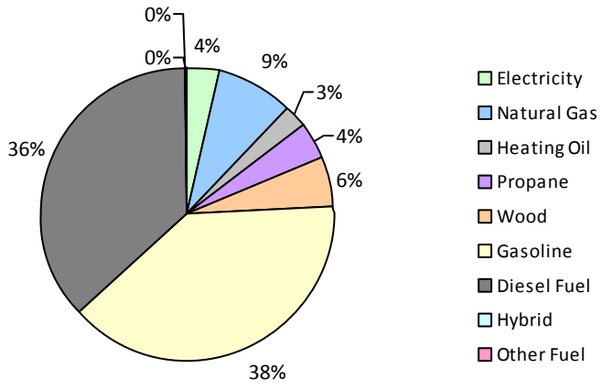
2010 GHG Emissions Sources (Total for BC)



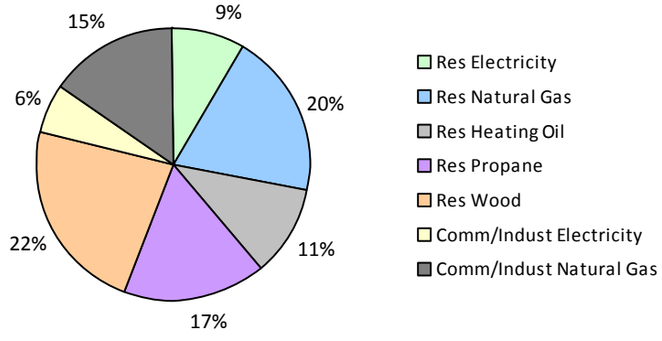
GHG Emissions Comparisons for this Community



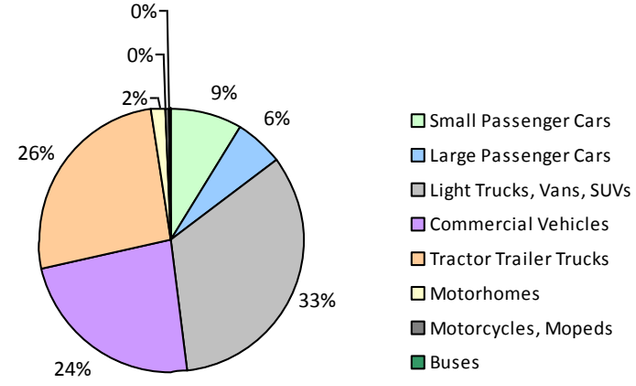
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



Thompson-Nicola Regional District Unincorporated Areas

2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

Core Items

On-Road Transportation		2007					2010				
		Connections	Consumption	Avg VKT (km)	Energy (GJ)	C02e (t)	Connections	Consumption	Avg VKT (km)	Energy (GJ)	C02e (t)
Small Passenger Cars	Hybrid			21,500	86	5			20,900	272	18
	Gasoline	3,428	4,870,497 L	16,300	170,467	11,617	3,427	5,020,880 L	16,700	175,731	11,290
	Diesel Fuel	188	289,974 L	24,200	11,107	793	197	308,051 L	24,000	11,799	817
Large Passenger Cars	Hybrid			23,800	206	13	19	28,355 L	26,500	994	64
	Gasoline	2,069	3,597,999 L	16,800	125,930	8,588	1,899	3,299,256 L	17,000	115,474	7,430
	Diesel Fuel	24	33,146 L	14,800	1,270	91	25	34,444 L	14,300	1,319	93
	Other Fuel			12,600	99	8			11,600	18	0
Light Trucks, Vans, SUVs	Hybrid			24,800	106	7			28,300	563	36
	Gasoline	6,915	17,145,633 L	18,600	600,097	41,164	7,230	18,407,074 L	19,200	644,248	41,843
	Diesel Fuel	564	1,390,901 L	14,000	53,271	3,788	412	1,130,803 L	16,800	43,309	2,991
	Other Fuel	118	249,421 L	12,500	6,311	382	59	109,351 L	11,000	2,766	168
Commercial Vehicles	Gasoline	1,006	2,961,979 L	19,000	103,669	6,960	1,085	3,187,006 L	19,300	111,547	7,128
	Diesel Fuel	1,805	7,563,144 L	23,900	289,669	20,351	2,021	9,385,470 L	26,900	359,465	24,505
	Other Fuel	40	95,229 L	13,100	2,410	146	29	62,836 L	12,200	1,590	97
Tractor Trailer Trucks	Gasoline			22,300	395	26					
	Diesel Fuel	499	13,781,380 L	49,000	527,827	37,084	473	13,592,959 L	48,800	520,610	35,492
Motorhomes	Gasoline	140	398,711 L	19,700	13,955	932	149	428,881 L	19,800	15,012	954
	Diesel Fuel	119	452,045 L	20,200	17,312	1,217	134	538,162 L	20,100	20,611	1,404
	Other Fuel			19,700	604	37			20,100	488	29
Motorcycles, Mopeds	Gasoline	280	61,212 L	5,100	2,142	143	346	96,133 L	6,200	3,366	214
Buses	Gasoline	16	47,523 L	17,400	1,664	113	15	42,849 L	17,900	1,498	96
	Diesel Fuel	34	134,631 L	19,600	5,156	362	30	115,712 L	30,200	4,432	301
Totals		**17,245**	**53,073,425 L**	**19,037**	**1,933,753**	**133,827**	**17,550**	**53,073,425 L**	**19,897**	**2,035,112**	**134,970**

Thompson-Nicola Regional District Unincorporated Areas

2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Wood	N/A	520,014 GJ	520,014	10,535	N/A	500,531 GJ	500,531	10,141
	Heating Oil	N/A	70,230 GJ	70,230	4,951	N/A	67,599 GJ	67,599	4,623
	Propane	N/A	123,763 GJ	123,763	7,551	N/A	119,126 GJ	119,126	7,268
	Natural Gas	2,548	185,346 GJ	185,346	9,297	2,670	171,650 GJ	171,650	8,610
	Electricity	11,549	155,698,887 kWh	560,516	3,892	11,671	153,826,583 kWh	553,775	3,847
Commercial/Small-Medium Industrial	Natural Gas	368	151,961 GJ	151,961	7,623	368	133,905 GJ	133,905	6,717
	Electricity	2,473	118,427,013 kWh	426,337	2,959	2,628	106,088,842 kWh	381,920	2,653
Totals		**16,938**		**2,038,167**	**46,808**	**17,337**		**1,928,506**	**43,859**

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	24,824 t	N/A	11,806	0	5,685 t	N/A	5,537
Totals		**0**			**11,806**	**0**			**5,537**

Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Large Industrial	Natural Gas	3		0	0	3		0	0
	Electricity	8	104,838,904 kWh	377,420	2,621	11	179,743,174 kWh	647,075	4,494
Totals		**11**		**377,420**	**2,621**	**14**		**647,075**	**4,494**

Thompson-Nicola Regional District Unincorporated Areas

2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

Totals for Transportation, Buildings and Solid Waste

Fuel Type	2007 (Population: 27,380)			2010 (Population: 24,417)		
	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	0 L	398	25	28,355 L	1,829	118
Gasoline	29,083,554 L	1,018,319	69,543	30,482,079 L	1,066,876	68,955
Diesel Fuel	23,645,221 L	905,612	63,686	25,105,601 L	961,545	65,603
Other Fuel	344,650 L	9,424	573	172,187 L	4,862	294
Wood	520,014 GJ	520,014	10,535	500,531 GJ	500,531	10,141
Heating Oil	70,230 GJ	70,230	4,951	67,599 GJ	67,599	4,623
Propane	123,763 GJ	123,763	7,551	119,126 GJ	119,126	7,268
Natural Gas	337,307 GJ	337,307	16,920	305,555 GJ	305,555	15,327
Electricity	274,125,900 kWh	986,853	6,851	259,915,425 kWh	935,695	6,500
Solid Waste	24,824 t	0	11,806	5,685 t	0	5,537
Grand Totals		**3,971,920**	**192,441**		**3,963,618**	**184,366**

Thompson-Nicola Regional District Unincorporated Areas

2010 Community Energy and Emissions Inventory

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	7,500	20	8,330	80	8,905	80
Semi-Detached House	85	0	95	1	135	1
Row House	95	0	150	1	190	2
Apartment, Duplex	65	0	80	1	155	1
Apartment, 5 storeys or higher	5	0	5	0	10	0
Apartment, under 5 storeys	180	0	205	2	175	2
Other Single Attached House	15	0	45	0	40	0
Movable Dwelling	1,595	4	1,545	15	1,570	14

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	7,365	82	7,845	80	9,015	84
Car, Truck,Van as Passenger	795	9	875	9	835	8
Public Transit	40	0	25	0	40	0
Walked	570	6	795	8	650	6
Bicycle	80	1	85	1	70	1
Motorcycle	0	0	20	0	10	0
Taxicab	5	0	0	0	5	0
Other Method	160	2	180	2	155	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	789,857	18
Local Parks	57	0
Agricultural Land Reserve	554,528	13
Other land use	3,042,771	69
Total Parks and Protected Area	789,914	18
Total Land Area	4,387,213	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	789,857	18
Local Parks	57	0
Agricultural Land Reserve	554,528	13
Other land use	3,042,771	69
Total Parks and Protected Area	789,914	18
Total Land Area	4,387,213	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,