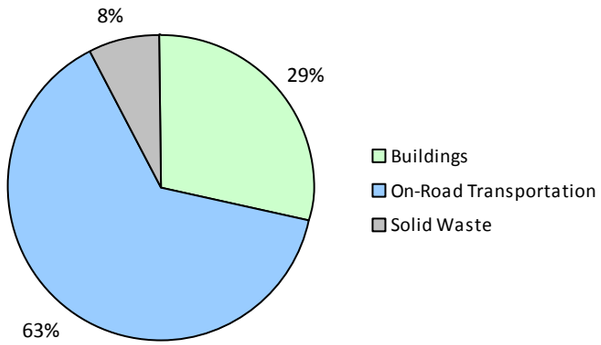
North Okanagan Regional District Unincorporated Areas

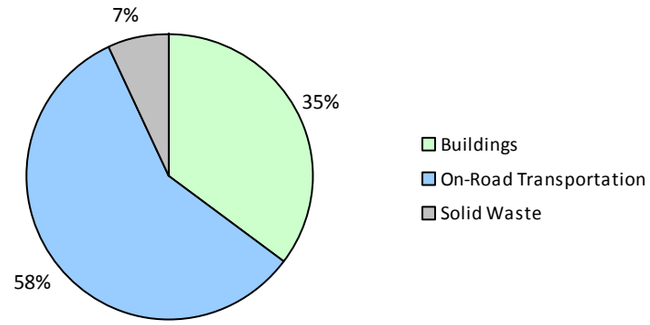
2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

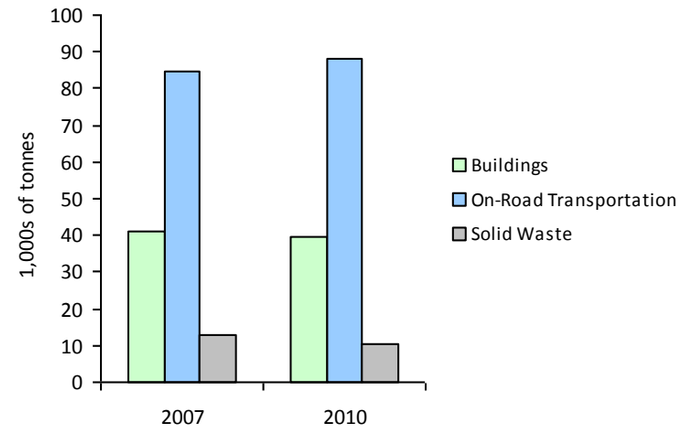
2010 GHG Emissions Sources (Total for this Community)



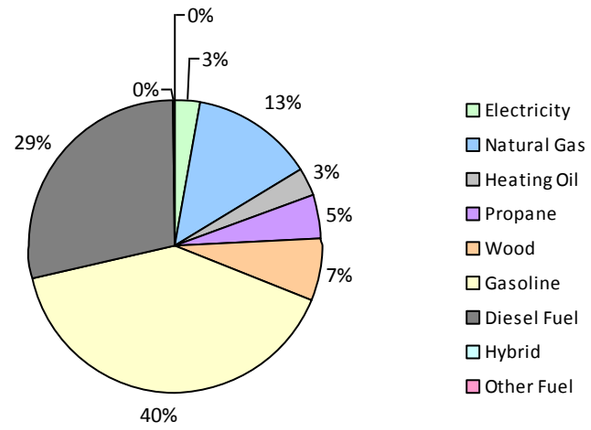
2010 GHG Emissions Sources (Total for BC)



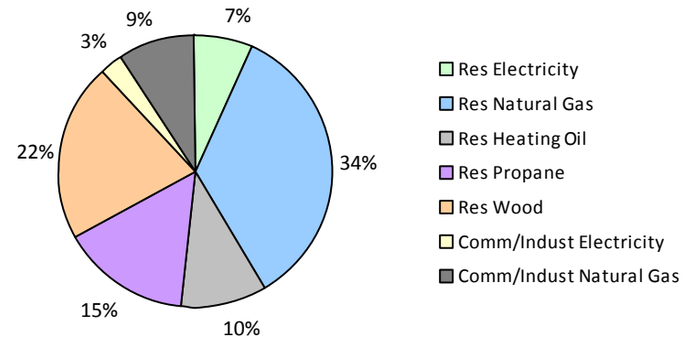
GHG Emissions Comparisons for this Community



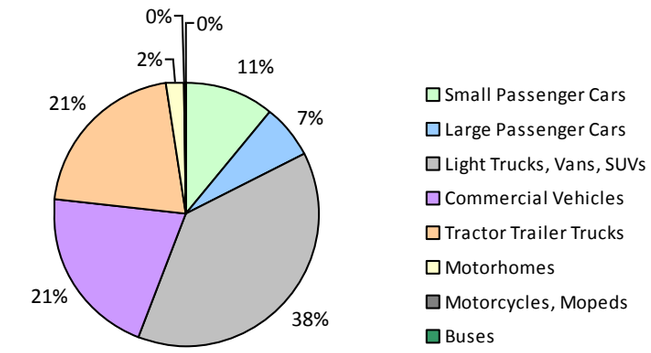
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



North Okanagan Regional District Unincorporated Areas

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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			18,600	132	10			20,200	293	19
	Gasoline	2,686	3,939,631 L	15,800	137,888	9,380	2,755	4,073,203 L	16,000	142,563	9,156
	Diesel Fuel	129	191,703 L	22,900	7,343	523	140	213,854 L	22,400	8,192	569
Large Passenger Cars	Hybrid			22,200	205	13	14	16,610 L	23,200	580	36
	Gasoline	1,544	2,766,602 L	16,100	96,831	6,592	1,468	2,594,782 L	15,900	90,816	5,833
	Diesel Fuel	26	34,264 L	14,500	1,314	94	26	34,870 L	14,000	1,336	93
	Other Fuel			11,500	41	3					
Light Trucks, Vans, SUVs	Hybrid			26,000	443	29	12	27,749 L	25,300	971	62
	Gasoline	4,957	12,743,507 L	18,500	446,023	30,553	5,270	13,547,515 L	18,700	474,163	30,764
	Diesel Fuel	388	992,834 L	14,600	38,024	2,703	285	819,810 L	17,100	31,401	2,169
	Other Fuel	83	172,219 L	12,400	4,356	264	44	79,812 L	10,700	2,020	122
Commercial Vehicles	Gasoline	536	1,629,780 L	19,400	57,043	3,831	640	1,934,068 L	19,300	67,694	4,328
	Diesel Fuel	1,007	4,244,017 L	24,100	162,546	11,421	1,205	5,518,659 L	26,500	211,365	14,409
	Other Fuel	19	50,328 L	13,600	1,273	78	12	27,475 L	12,900	696	42
Tractor Trailer Trucks	Diesel Fuel	288	6,467,428 L	50,500	247,703	17,404	309	7,109,153 L	49,300	272,282	18,561
Motorhomes	Gasoline	101	287,802 L	19,700	10,072	671	121	348,637 L	19,800	12,203	776
	Diesel Fuel	75	288,520 L	20,100	11,051	777	85	347,890 L	20,100	13,325	907
	Other Fuel			18,900	320	20			20,300	205	12
Motorcycles, Mopeds	Gasoline	224	48,209 L	4,900	1,686	112	294	78,354 L	6,000	2,743	174
Buses	Gasoline			16,800	890	60			16,700	657	41
	Diesel Fuel								18,400	404	27
Totals		**12,063**	**33,856,844 L**	**18,494**	**1,225,184**	**84,538**	**12,680**	**33,856,844 L**	**19,005**	**1,333,909**	**88,100**

North Okanagan 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	437,142 GJ	437,142	8,856	N/A	420,765 GJ	420,765	8,525
	Heating Oil	N/A	58,943 GJ	58,943	4,155	N/A	56,735 GJ	56,735	3,880
	Propane	N/A	103,729 GJ	103,729	6,329	N/A	99,842 GJ	99,842	6,091
	Natural Gas	3,680	286,119 GJ	286,119	14,352	3,745	270,856 GJ	270,856	13,587
	Electricity	8,180	107,796,951 kWh	388,069	2,697	8,764	112,831,912 kWh	406,195	2,822
Commercial/Small-Medium Industrial	Natural Gas	200	73,892 GJ	73,892	3,706	191	72,460 GJ	72,460	3,635
	Electricity	807	39,113,900 kWh	140,810	977	861	41,663,098 kWh	149,987	1,043
Totals		**12,867**		**1,488,704**	**41,072**	**13,561**		**1,476,840**	**39,583**

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	14,201 t	N/A	12,745	0	9,364 t	N/A	10,380
Totals		**0**			**12,745**	**0**			**10,380**

Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Large Industrial	Natural Gas	5		0	0	3		0	0
	Electricity	2		0	0	2		0	0
Totals		**7**			**0**	**5**			**0**

North Okanagan 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: 18,746)			2010 (Population: 19,549)		
	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	0 L	780	52	44,359 L	1,844	117
Gasoline	21,415,531 L	750,433	51,199	22,576,559 L	790,839	51,072
Diesel Fuel	12,218,766 L	467,981	32,922	14,044,236 L	538,305	36,735
Other Fuel	222,547 L	5,990	365	107,287 L	2,921	176
Wood	437,142 GJ	437,142	8,856	420,765 GJ	420,765	8,525
Heating Oil	58,943 GJ	58,943	4,155	56,735 GJ	56,735	3,880
Propane	103,729 GJ	103,729	6,329	99,842 GJ	99,842	6,091
Natural Gas	360,011 GJ	360,011	18,058	343,316 GJ	343,316	17,222
Electricity	146,910,851 kWh	528,879	3,674	154,495,010 kWh	556,182	3,865
Solid Waste	14,201 t	0	12,745	9,364 t	0	10,380
Grand Totals		**2,713,888**	**138,355**		**2,810,749**	**138,063**

North Okanagan 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	5,115	20	5,580	86	6,105	85
Semi-Detached House	50	0	80	1	90	1
Row House	20	0	30	0	35	0
Apartment, Duplex	100	0	130	2	210	3
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	45	0	50	1	90	1
Other Single Attached House	20	0	20	0	20	0
Movable Dwelling	800	3	615	9	615	9

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	5,300	84	5,405	87	6,510	85
Car, Truck,Van as Passenger	515	8	355	6	620	8
Public Transit	15	0	20	0	50	1
Walked	250	4	285	5	300	4
Bicycle	55	1	35	1	70	1
Motorcycle	5	0	15	0	20	0
Taxicab	0	0	0	0	5	0
Other Method	140	2	75	1	75	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	59,647	8
Local Parks	19	0
Agricultural Land Reserve	49,418	7
Other land use	605,735	85
Total Parks and Protected Area	59,667	8
Total Land Area	714,820	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	59,647	8
Local Parks	19	0
Agricultural Land Reserve	49,418	7
Other land use	605,735	85
Total Parks and Protected Area	59,667	8
Total Land Area	714,820	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

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