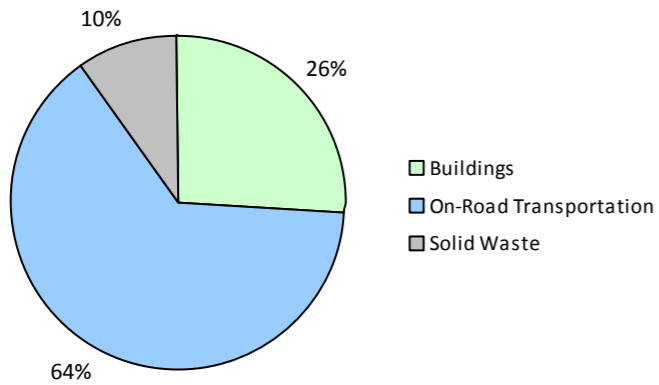


Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

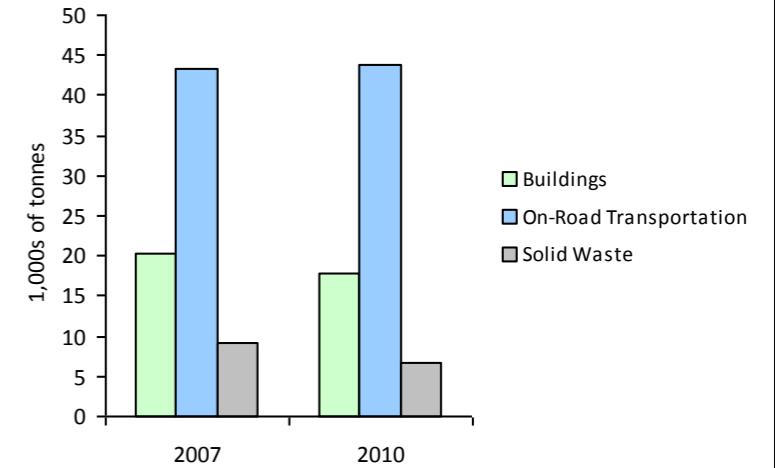
2010 GHG Emissions Sources (Total for this Community)



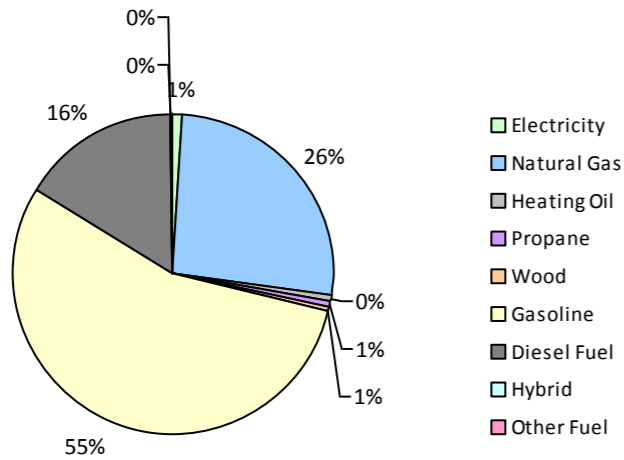
2010 GHG Emissions Sources (Total for BC)



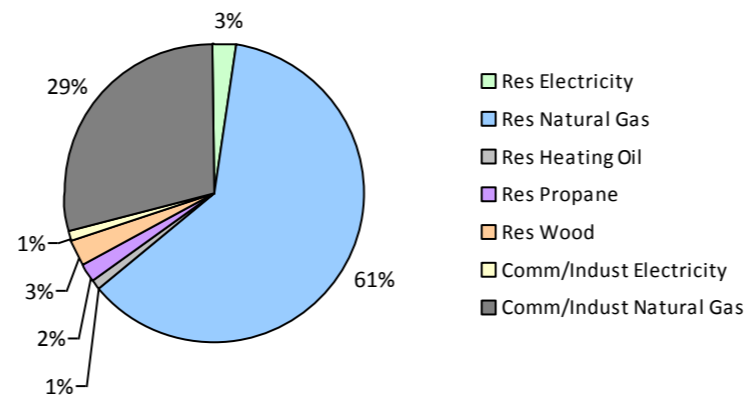
GHG Emissions Comparisons for this Community



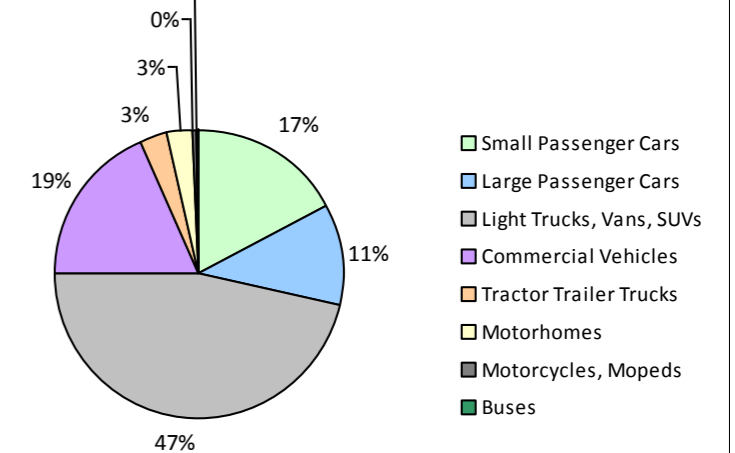
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



Summerland District Municipality 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)	CO2e (t)	Connections	Consumption	Avg VKT (km)	Energy (GJ)	CO2e (t)
Small Passenger Cars	Hybrid			18,800	93	7			18,600	89	6
	Gasoline	2,170	3,084,029 L	15,000	107,941	7,347	2,210	3,140,986 L	15,000	109,934	7,059
	Diesel Fuel	129	198,634 L	22,500	7,608	543	137	207,490 L	22,000	7,947	550
Large Passenger Cars	Hybrid			20,000	96	6	16	18,332 L	21,000	642	41
	Gasoline	1,327	2,302,070 L	15,200	80,572	5,478	1,259	2,133,875 L	14,900	74,685	4,798
	Diesel Fuel	14	19,873 L	15,000	762	54	17	24,337 L	15,900	932	65
Light Trucks, Vans, SUVs	Hybrid			32,100	180	11			23,100	413	27
	Gasoline	3,134	7,956,847 L	17,700	278,489	19,062	3,375	8,406,877 L	17,500	294,241	19,094
	Diesel Fuel	221	537,529 L	13,800	20,588	1,462	171	459,446 L	15,700	17,597	1,215
	Other Fuel	27	56,307 L	12,200	1,425	87	15	26,597 L	10,600	673	41
Commercial Vehicles	Gasoline	264	837,802 L	18,900	29,323	1,969	310	958,278 L	18,500	33,540	2,144
	Diesel Fuel	396	1,690,038 L	23,700	64,728	4,547	489	2,254,207 L	25,700	86,336	5,886
	Other Fuel	17	42,529 L	13,100	1,076	65	12	25,148 L	11,300	636	38
Tractor Trailer Trucks	Diesel Fuel	49	528,867 L	26,000	20,256	1,424	53	539,013 L	24,900	20,644	1,407
	Other Fuel							7,500	98	5	
Motorhomes	Gasoline	92	263,734 L	19,700	9,230	617	93	269,988 L	19,600	9,449	602
	Diesel Fuel	56	208,558 L	19,800	7,988	561	68	261,551 L	19,600	10,018	683
	Other Fuel			16,000	184	11		21,200	83	5	
Motorcycles, Mopeds	Gasoline	191	41,728 L	5,000	1,460	98	200	53,021 L	6,100	1,857	118
Buses	Gasoline			13,800	660	43			12,400	386	24
	Diesel Fuel			19,000	567	40			17,500	705	48
	Other Fuel			10,300	53	4			9,700	52	4
Totals		8,087	17,768,545 L	16,623	633,279	43,436	8,425	17,768,545 L	16,803	670,957	43,860

Summerland District Municipality 2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Residential	Wood	N/A	23,983 GJ	23,983	486	N/A	23,084 GJ	23,084	468
	Heating Oil	N/A	3,243 GJ	3,243	229	N/A	3,121 GJ	3,121	213
	Propane	N/A	5,721 GJ	5,721	349	N/A	5,507 GJ	5,507	336
	Natural Gas	3,326	241,881 GJ	241,881	12,132	3,367	217,777 GJ	217,777	10,923
	Electricity	4,992	64,830,129 kWh	233,388	275	5,201	65,024,061 kWh	234,086	461
Commercial/Small-Medium Industrial	Natural Gas	283	131,634 GJ	131,634	6,603	280	105,163 GJ	105,163	5,275
	Electricity	567	37,029,595 kWh	133,306	117	593	35,335,388 kWh	127,207	214
Totals		9,168		773,156	20,191	9,441		715,945	17,890

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Community Solid Waste	Solid Waste	0	11,033 t	N/A	9,282	0	12,247 t	N/A	6,637
Totals		0			9,282	0			6,637

Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Large Industrial	Natural Gas	2		0	0	1		0	0
	Electricity	1		0	0	1		0	0
Totals		3			0	2			0

**Summerland District Municipality
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: 11,012)			2010 (Population: 11,007)		
	Consumption	Energy (GJ)	CO2e (t)	Consumption	Energy (GJ)	CO2e (t)
Hybrid	0 L	369	24	18,332 L	1,144	74
Gasoline	14,486,210 L	507,675	34,614	14,963,025 L	524,092	33,839
Diesel Fuel	3,183,499 L	122,497	8,631	3,746,044 L	144,179	9,854
Other Fuel	98,836 L	2,738	167	51,745 L	1,542	93
Wood	23,983 GJ	23,983	486	23,084 GJ	23,084	468
Heating Oil	3,243 GJ	3,243	229	3,121 GJ	3,121	213
Propane	5,721 GJ	5,721	349	5,507 GJ	5,507	336
Natural Gas	373,515 GJ	373,515	18,735	322,940 GJ	322,940	16,198
Electricity	101,859,724 kWh	366,694	392	100,359,449 kWh	361,293	675
Solid Waste	11,033 t	0	9,282	12,247 t	0	6,637
Grand Totals		1,406,435	72,909		1,386,902	68,387

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	3,290	43	3,385	76	3,520	78
Semi-Detached House	150	2	160	4	85	2
Row House	265	3	220	5	300	7
Apartment, Duplex	95	1	80	2	60	1
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	355	5	530	12	510	11
Other Single Attached House	10	0	10	0	25	1
Movable Dwelling	135	2	95	2	25	1

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	2,940	85	3,300	82	3,375	82
Car, Truck, Van as Passenger	160	5	305	8	370	9
Public Transit	15	0	10	0	30	1
Walked	255	7	285	7	250	6
Bicycle	25	1	75	2	45	1
Motorcycle	0	0	0	0	10	0
Taxicab	10	0	10	0	0	0
Other Method	35	1	35	1	35	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	104	1
Local Parks	81	1
Agricultural Land Reserve	2,794	36
Other land use	4,711	61
Total Parks and Protected Area	185	2
Total Land Area	7,690	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	104	1
Local Parks	81	1
Agricultural Land Reserve	2,794	36
Other land use	4,711	61
Total Parks and Protected Area	185	2
Total Land Area	7,690	100

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

Summerland District Municipality
2010 Community Energy and Emissions Inventory
Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

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Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

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,