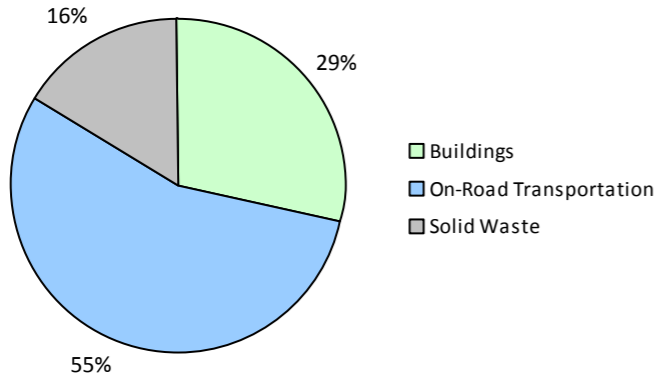
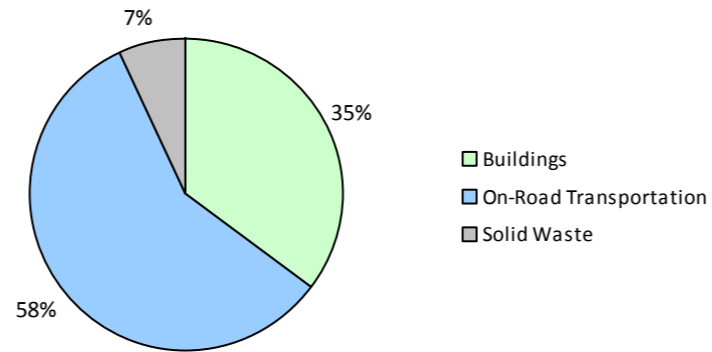


## Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

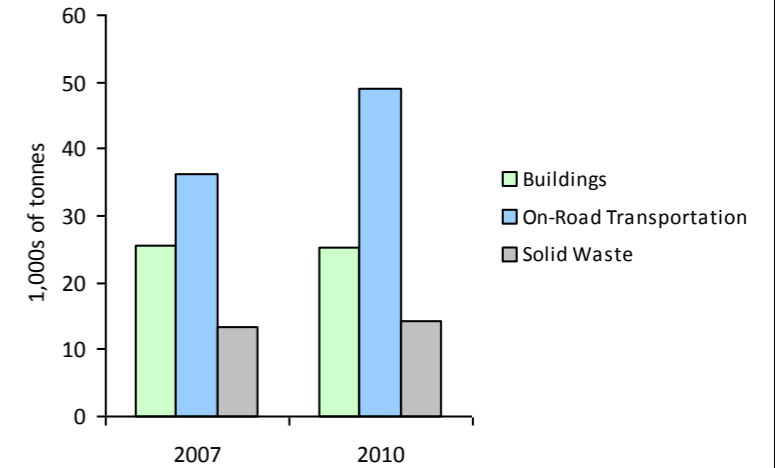
2010 GHG Emissions Sources (Total for this Community)



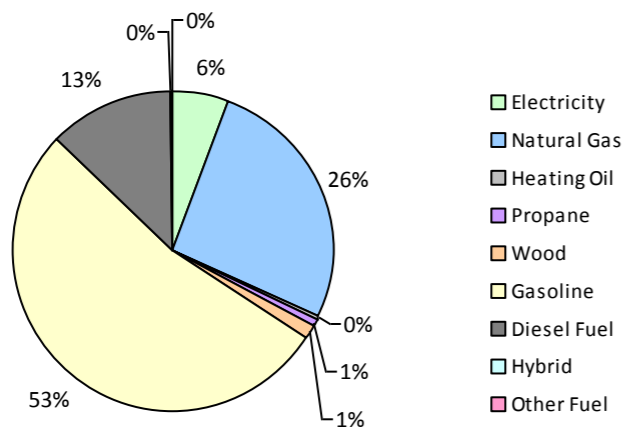
2010 GHG Emissions Sources (Total for BC)



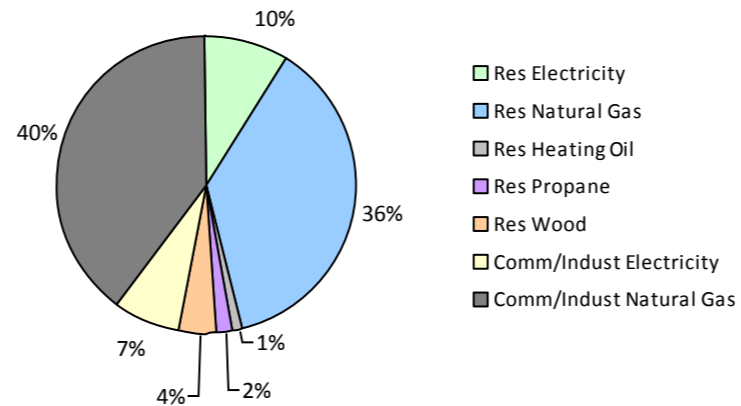
GHG Emissions Comparisons for this Community



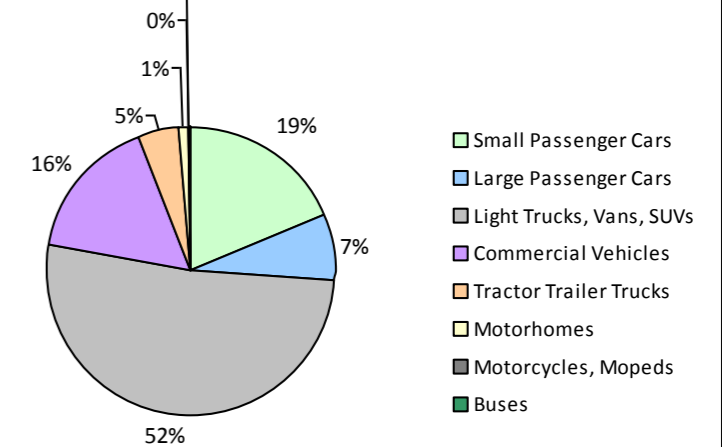
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



## Squamish 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			20,500	203	15			17,700	169	11
	Gasoline	1,526	2,595,026 L	17,800	90,825	6,150	2,264	3,860,386 L	17,900	135,114	8,648
	Diesel Fuel	79	157,600 L	29,600	6,036	431	113	198,046 L	25,900	7,584	524
Large Passenger Cars	Hybrid			29,000	190	12	18	26,306 L	26,800	921	59
	Gasoline	647	1,253,140 L	17,100	43,860	2,970	816	1,536,328 L	16,700	53,772	3,450
	Diesel Fuel	16	21,054 L	14,600	807	57	37	36,935 L	10,800	1,415	97
	Other Fuel			12,000	83	4			14,200	47	4
Light Trucks, Vans, SUVs	Hybrid			19,900	105	8			32,700	838	53
	Gasoline	2,432	7,725,405 L	21,800	270,389	18,425	3,385	10,868,068 L	22,100	380,382	24,598
	Diesel Fuel	90	228,757 L	14,800	8,761	623	85	234,699 L	17,600	8,989	622
	Other Fuel	11	21,898 L	12,000	554	34			10,500	317	19
Commercial Vehicles	Gasoline	183	635,567 L	20,500	22,245	1,494	286	1,038,588 L	21,500	36,350	2,324
	Diesel Fuel	280	1,179,220 L	23,800	45,163	3,173	440	2,123,868 L	27,100	81,343	5,545
	Other Fuel			15,300	351	21			10,400	290	18
Tractor Trailer Trucks	Diesel Fuel	42	872,733 L	47,300	33,426	2,348	66	875,063 L	32,200	33,515	2,285
Motorhomes	Gasoline	25	69,907 L	20,500	2,447	164	40	109,588 L	20,100	3,836	244
	Diesel Fuel	16	54,004 L	18,500	2,068	146	21	68,289 L	18,300	2,615	179
	Other Fuel			21,300	81	5			17,700	63	4
Motorcycles, Mopeds	Gasoline	138	30,858 L	4,800	1,080	72	216	60,084 L	6,200	2,103	133
Buses	Gasoline			22,000	593	40			21,400	715	45
	Diesel Fuel			21,400	845	59			17,400	303	21
	Other Fuel			9,800	52	3			9,300	51	3
<b>Totals</b>		<b>5,485</b>	<b>14,845,169 L</b>	<b>19,900</b>	<b>530,164</b>	<b>36,254</b>	<b>7,787</b>	<b>14,845,169 L</b>	<b>20,161</b>	<b>750,732</b>	<b>48,886</b>

## Squamish 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	50,521 GJ	50,521	1,024	N/A	48,628 GJ	48,628	985
	Heating Oil	N/A	4,124 GJ	4,124	291	N/A	3,969 GJ	3,969	271
	Propane	N/A	7,283 GJ	7,283	444	N/A	7,010 GJ	7,010	428
	Natural Gas	2,961	189,537 GJ	189,537	9,508	3,161	182,661 GJ	182,661	9,162
	Electricity	6,437	95,708,846 kWh	344,552	2,393	7,042	96,435,650 kWh	347,168	2,411
Commercial/Small-Medium Industrial	Natural Gas	405	204,719 GJ	204,719	10,269	400	201,440 GJ	201,440	10,104
	Electricity	1,126	69,252,196 kWh	249,308	1,731	1,295	75,744,441 kWh	272,680	1,894
<b>Totals</b>		<b>10,929</b>		<b>1,050,044</b>	<b>25,660</b>	<b>11,898</b>		<b>1,063,556</b>	<b>25,255</b>

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Community Solid Waste	Solid Waste	0	15,748 t	N/A	13,358	0	14,230 t	N/A	14,397
<b>Totals</b>		<b>0</b>			<b>13,358</b>	<b>0</b>			<b>14,397</b>

### Totals for Transportation, Buildings and Solid Waste

Fuel Type	2007 (Population: 15,980)			2010 (Population: 17,898)		
	Consumption	Energy (GJ)	CO2e (t)	Consumption	Energy (GJ)	CO2e (t)
Hybrid	0 L	498	35	26,306 L	1,928	123
Gasoline	12,309,903 L	431,439	29,315	17,473,042 L	612,272	39,442
Diesel Fuel	2,513,368 L	97,106	6,837	3,536,900 L	135,764	9,273
Other Fuel	21,898 L	1,121	67	0 L	768	48
Wood	50,521 GJ	50,521	1,024	48,628 GJ	48,628	985
Heating Oil	4,124 GJ	4,124	291	3,969 GJ	3,969	271
Propane	7,283 GJ	7,283	444	7,010 GJ	7,010	428
Natural Gas	394,256 GJ	394,256	19,777	384,101 GJ	384,101	19,266
Electricity	164,961,042 kWh	593,860	4,124	172,180,091 kWh	619,848	4,305
Solid Waste	15,748 t	0	13,358	14,230 t	0	14,397
<b>Grand Totals</b>		<b>1,580,208</b>	<b>75,272</b>		<b>1,814,288</b>	<b>88,538</b>

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**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	2,995	38	3,160	61	3,010	54
Semi-Detached House	190	2	250	5	485	9
Row House	455	6	630	12	745	13
Apartment, Duplex	315	4	245	5	195	3
Apartment, 5 storeys or higher	15	0	20	0	0	0
Apartment, under 5 storeys	595	8	625	12	825	15
Other Single Attached House	75	1	30	1	15	0
Movable Dwelling	275	3	195	4	325	6

**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	4,950	74	5,320	77	5,890	75
Car, Truck, Van as Passenger	900	14	980	14	1,040	13
Public Transit	110	2	135	2	215	3
Walked	390	6	280	4	410	5
Bicycle	155	2	130	2	145	2
Motorcycle	20	0	10	0	50	1
Taxicab	25	0	10	0	10	0
Other Method	115	2	60	1	90	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	2,101	19
Local Parks	48	0
Agricultural Land Reserve	802	7
Other land use	8,089	73
Total Parks and Protected Area	2,149	19
Total Land Area	11,040	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	2,101	19
Local Parks	48	0
Agricultural Land Reserve	802	7
Other land use	8,089	73
Total Parks and Protected Area	2,149	19
Total Land Area	11,040	100

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

**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	
	Units	%
Less than 5 km	2,810	45
5 to 9.9 km	1,020	16
25 km or more	2,375	38
15 to 24.9 km	0	0
10 to 14.9 km	40	1

**Squamish District Municipality**  
**2010 Community Energy and Emissions Inventory**  
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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](mailto: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](mailto: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,