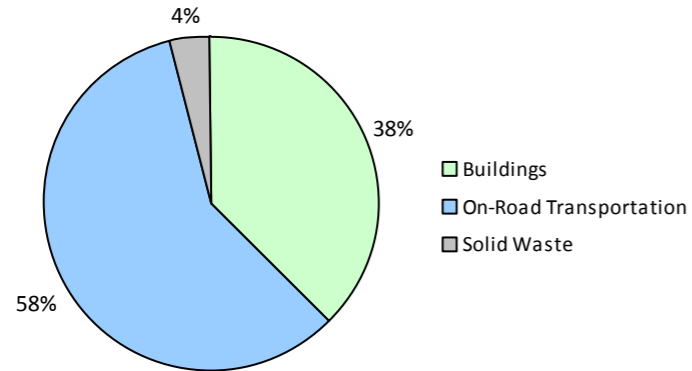


## Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

2010 GHG Emissions Sources (Total for this Community)



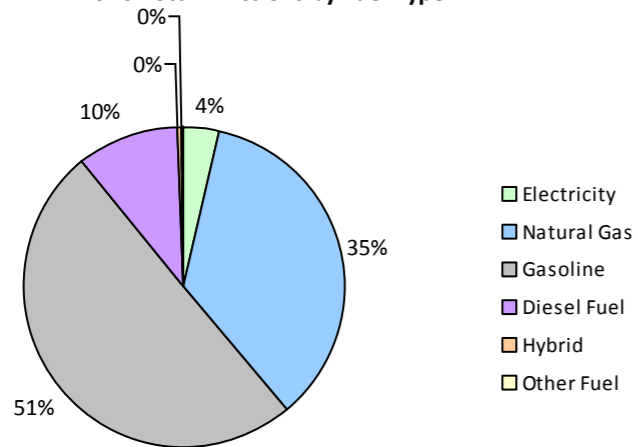
2010 GHG Emissions Sources (Total for BC)



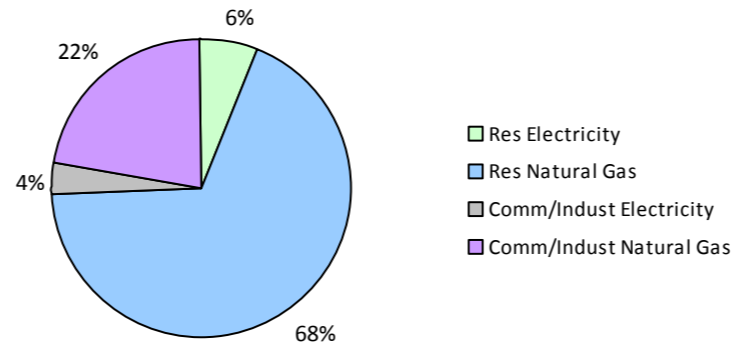
GHG Emissions Comparisons for this Community



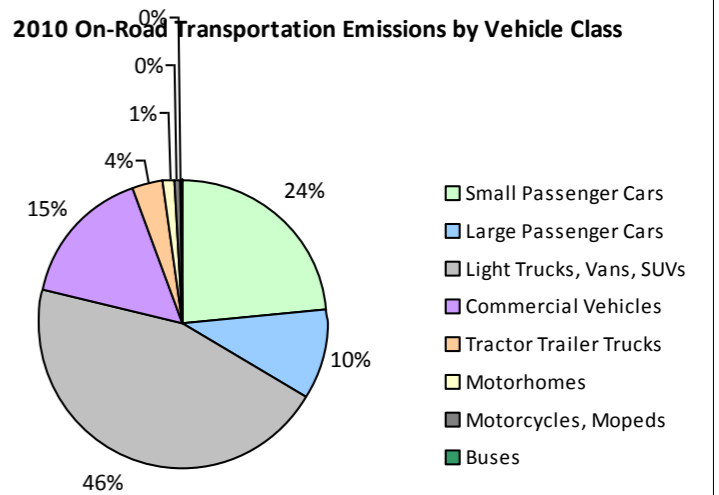
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



*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	21	15,438 L	15,600	540	36	38	31,336 L	16,000	1,097	70
	Gasoline	14,855	19,525,991 L	13,800	683,411	46,272	15,431	19,969,717 L	13,600	698,940	44,774
	Diesel Fuel	386	439,256 L	17,000	16,824	1,200	426	488,125 L	16,800	18,695	1,295
	Other Fuel			14,900	99	6			17,100	167	10
Large Passenger Cars	Hybrid	37	31,977 L	16,600	1,120	75	86	97,974 L	20,100	3,429	218
	Gasoline	5,976	8,643,069 L	12,600	302,507	20,499	5,831	8,248,767 L	12,400	288,707	18,502
	Diesel Fuel	57	73,929 L	13,600	2,832	201	68	90,663 L	14,400	3,473	240
	Other Fuel	27	418,472 L	88,600	10,588	642	26	449,742 L	95,800	11,378	689
Light Trucks, Vans, SUVs	Hybrid	15	20,674 L	17,200	723	48	62	93,544 L	17,200	3,274	211
	Gasoline	17,263	35,622,209 L	14,800	1,246,777	85,030	18,876	38,109,123 L	14,600	1,333,819	86,277
	Diesel Fuel	375	908,102 L	14,300	34,781	2,475	358	912,000 L	16,100	34,930	2,415
	Other Fuel	120	267,214 L	13,200	6,761	410	78	166,908 L	12,600	4,223	255
Commercial Vehicles	Hybrid								21,500	177	11
	Gasoline	1,685	4,043,730 L	14,500	141,531	9,497	1,771	4,257,585 L	14,500	149,015	9,522
	Diesel Fuel	1,777	6,284,158 L	18,100	240,683	16,910	2,271	7,865,157 L	18,100	301,235	20,534
	Other Fuel	123	271,746 L	12,100	6,875	416	91	186,425 L	11,300	4,716	286
Tractor Trailer Trucks	Gasoline			11,000	239	16			15,000	452	30
	Diesel Fuel	266	3,182,540 L	29,800	121,891	8,563	263	2,624,216 L	25,000	100,507	6,852
	Other Fuel			12,500	86	5			9,500	67	4
Motorhomes	Gasoline	261	621,443 L	17,000	21,750	1,454	254	605,282 L	17,000	21,185	1,348
	Diesel Fuel	135	421,752 L	17,000	16,153	1,134	130	425,519 L	17,000	16,297	1,112
	Other Fuel			16,700	508	30			17,800	408	24
Motorcycles, Mopeds	Gasoline	1,016	250,440 L	5,500	8,766	585	1,096	306,971 L	6,300	10,744	681
Buses	Gasoline	60	260,925 L	27,300	9,132	614	64	260,521 L	25,800	9,119	583
	Diesel Fuel	30	252,240 L	32,200	9,660	678	13	84,653 L	25,300	3,242	221
	Other Fuel			23,700	248	14			21,000	224	13
<b>Totals</b>		<b>44,485</b>	<b>81,555,305 L</b>	<b>14,265</b>	<b>2,884,485</b>	<b>196,810</b>	<b>47,233</b>	<b>81,555,305 L</b>	<b>14,150</b>	<b>3,019,520</b>	<b>196,177</b>

## Maple Ridge 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	Natural Gas	19,972	1,865,654 GJ	1,865,654	93,581	20,716	1,687,988 GJ	1,687,988	84,670
	Electricity	25,958	307,165,739 kWh	1,105,796	7,679	27,503	314,577,529 kWh	1,132,478	7,865
Commercial/Small-Medium Industrial	Natural Gas	1,280	581,629 GJ	581,629	29,175	1,265	561,064 GJ	561,064	28,143
	Electricity	2,550	187,204,290 kWh	673,935	4,680	2,679	189,999,455 kWh	683,997	4,750
<b>Totals</b>		<b>49,760</b>		<b>4,227,014</b>	<b>135,115</b>	<b>52,163</b>		<b>4,065,527</b>	<b>125,428</b>

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Community Solid Waste	Solid Waste	0	34,619 t	N/A	9,465	0	26,563 t	N/A	12,599
<b>Totals</b>		<b>0</b>			<b>9,465</b>	<b>0</b>			<b>12,599</b>

### Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Large Industrial	Natural Gas	17	287,948 GJ	287,948	14,443	11	220,715 GJ	220,715	11,071
	Electricity	2		0	0	1		0	0
<b>Totals</b>		<b>19</b>		<b>287,948</b>	<b>14,443</b>	<b>12</b>		<b>220,715</b>	<b>11,071</b>

## Maple Ridge 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: 72,502)			2010 (Population: 76,418)		
	Consumption	Energy (GJ)	CO2e (t)	Consumption	Energy (GJ)	CO2e (t)
Hybrid	68,089 L	2,383	159	222,854 L	7,977	510
Gasoline	68,967,807 L	2,414,113	163,967	71,757,966 L	2,511,981	161,717
Diesel Fuel	11,561,977 L	442,824	31,161	12,490,333 L	478,379	32,669
Other Fuel	957,432 L	25,165	1,523	803,075 L	21,183	1,281
Natural Gas	2,447,283 GJ	2,447,283	122,756	2,249,052 GJ	2,249,052	112,813
Electricity	494,370,029 kWh	1,779,731	12,359	504,576,984 kWh	1,816,475	12,615
Solid Waste	34,619 t	0	9,465	26,563 t	0	12,599
<b>Grand Totals</b>		<b>7,111,499</b>	<b>341,390</b>		<b>7,085,047</b>	<b>334,204</b>

*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	13,110	40	14,650	65	15,250	61
Semi-Detached House	570	2	465	2	545	2
Row House	2,380	7	2,680	12	2,650	11
Apartment, Duplex	825	3	1,050	5	2,385	10
Apartment, 5 storeys or higher	375	1	625	3	685	3
Apartment, under 5 storeys	2,220	7	2,930	13	3,155	13
Other Single Attached House	70	0	20	0	25	0
Movable Dwelling	235	1	165	1	230	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	20,495	83	24,065	83	26,555	80
Car, Truck, Van as Passenger	1,615	7	1,900	7	2,440	7
Public Transit	1,090	4	1,350	5	2,475	7
Walked	860	4	1,120	4	1,090	3
Bicycle	270	1	275	1	225	1
Motorcycle	45	0	90	0	205	1
Taxicab	20	0	30	0	25	0
Other Method	185	1	155	1	265	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	5,323	19
Local Parks	652	2
Agricultural Land Reserve	3,790	13
Other land use	18,749	66
Total Parks and Protected Area	5,974	21
Total Land Area	28,513	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	5,323	19
Local Parks	652	2
Agricultural Land Reserve	3,790	13
Other land use	18,749	66
Total Parks and Protected Area	5,974	21
Total Land Area	28,513	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	7,730	28
5 to 9.9 km	3,885	14
25 km or more	7,500	27
15 to 24.9 km	5,185	18
10 to 14.9 km	3,805	14

**Maple Ridge 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](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,