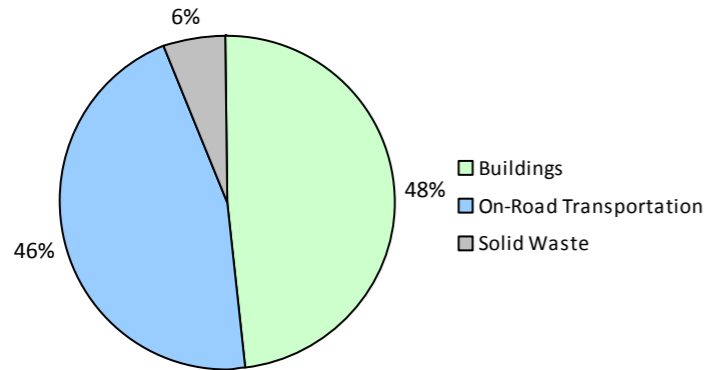


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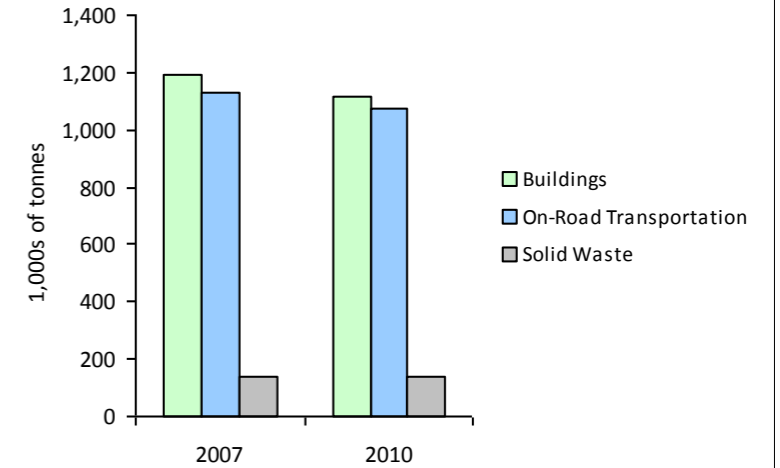
**2010 GHG Emissions Sources (Total for this Community)**



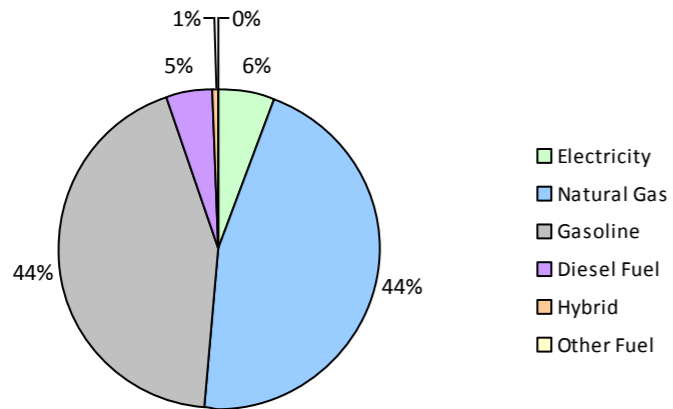
**2010 GHG Emissions Sources (Total for BC)**



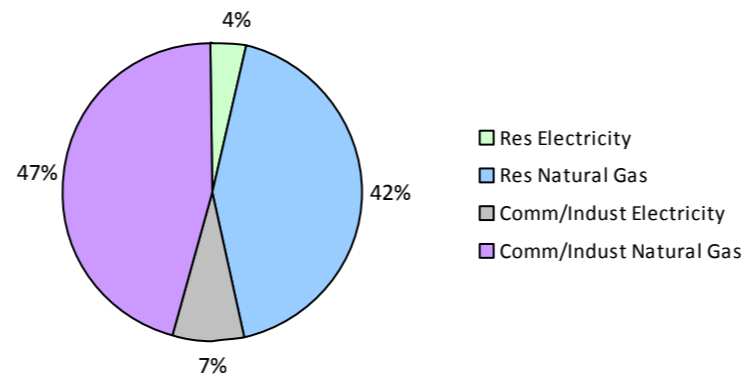
**GHG Emissions Comparisons for this Community**



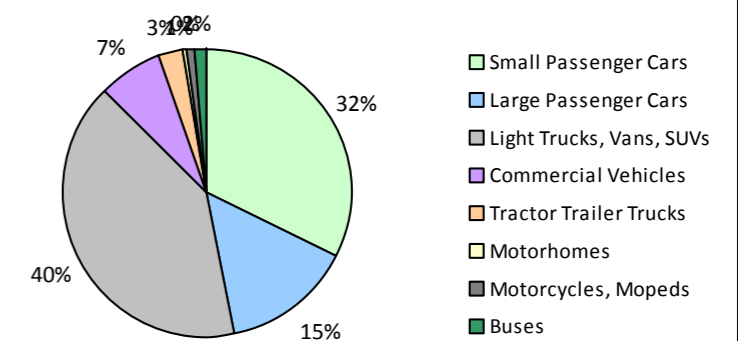
**2010 Total Emissions by Fuel Type**



**2010 Building Emissions by Subsector**



**2010 On-Road Transportation Emissions by Vehicle Class**



## Vancouver City 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	219	157,253 L	15,600	5,504	368	445	351,820 L	15,500	12,314	783
	Gasoline	123,756	158,144,502 L	13,400	5,535,058	375,057	121,157	151,791,398 L	13,100	5,312,699	340,540
	Diesel Fuel	1,867	1,992,562 L	16,000	76,314	5,439	1,889	2,022,575 L	15,800	77,465	5,360
	Other Fuel	18	24,978 L	14,900	632	38	42	62,491 L	15,100	1,581	95
Large Passenger Cars	Hybrid	729	1,156,243 L	30,300	40,468	2,707	1,851	3,362,429 L	32,100	117,685	7,489
	Gasoline	47,844	74,286,690 L	13,600	2,600,034	175,749	44,551	65,878,775 L	13,000	2,305,757	147,705
	Diesel Fuel	541	648,626 L	12,300	24,842	1,765	605	717,621 L	12,600	27,485	1,899
	Other Fuel	33	133,558 L	28,900	3,380	205	20	27,153 L	10,400	687	41
Light Trucks, Vans, SUVs	Hybrid	342	454,629 L	16,800	15,912	1,078	1,023	1,460,686 L	16,700	51,124	3,294
	Gasoline	84,010	177,350,752 L	15,200	6,207,276	422,797	91,749	186,526,606 L	14,800	6,528,431	422,054
	Diesel Fuel	1,262	2,947,294 L	13,900	112,882	8,029	1,552	4,095,829 L	18,300	156,871	10,852
	Other Fuel	396	797,218 L	12,000	20,169	1,222	229	426,357 L	11,200	10,787	652
Commercial Vehicles	Hybrid								22,300	735	47
	Gasoline	4,554	13,463,395 L	17,700	471,219	31,649	5,177	15,256,826 L	17,700	533,989	34,140
	Diesel Fuel	3,531	13,512,862 L	19,000	517,542	36,362	4,197	16,132,812 L	19,500	617,887	42,123
	Other Fuel	283	627,323 L	12,200	15,870	962	169	340,440 L	11,200	8,613	521
Tractor Trailer Trucks	Gasoline	15	63,309 L	14,800	2,217	148			23,000	1,659	106
	Diesel Fuel	1,169	12,722,812 L	27,200	487,284	34,236	1,072	11,276,197 L	26,600	431,878	29,442
Motorhomes	Gasoline	835	1,915,744 L	16,600	67,051	4,471	812	1,850,174 L	16,500	64,756	4,109
	Diesel Fuel	388	1,137,545 L	16,600	43,568	3,059	353	1,059,382 L	16,500	40,575	2,765
	Other Fuel	22	53,745 L	16,200	1,360	83	18	44,162 L	16,300	1,117	68
Motorcycles, Mopeds	Gasoline	4,536	1,100,098 L	5,400	38,504	2,569	5,329	1,479,673 L	6,300	51,789	3,284
Buses	Hybrid								34,200	423	28
	Gasoline	384	1,695,148 L	28,100	59,330	3,983	425	1,822,327 L	27,200	63,781	4,079
	Diesel Fuel	605	5,154,884 L	32,000	197,432	13,872	635	4,535,936 L	30,300	173,726	11,843
	Other Fuel	68	271,886 L	19,900	6,879	417	44	161,606 L	18,500	4,088	247
<b>Totals</b>		<b>277,407</b>	<b>469,813,056 L</b>	<b>14,192</b>	<b>16,550,727</b>	<b>1,126,265</b>	<b>283,344</b>	<b>469,813,056 L</b>	<b>13,995</b>	<b>16,597,902</b>	<b>1,073,566</b>

## Vancouver City 2010 Community Energy and Emissions Inventory

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

		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Buildings	Residential	91,546	10,505,117 GJ	10,505,117	526,937	91,334	9,465,117 GJ	9,465,117	474,771
		239,426	1,813,268,028 kWh	6,527,760	45,333	248,837	1,795,933,392 kWh	6,465,355	44,900
Commercial/Small-Medium Industrial	Natural Gas	13,588	10,817,842 GJ	10,817,842	542,623	13,047	10,302,026 GJ	10,302,026	516,750
	Electricity	27,170	3,137,202,779 kWh	11,293,921	78,433	28,557	3,260,251,880 kWh	11,736,897	81,509
<b>Totals</b>		<b>371,730</b>		<b>39,144,640</b>	<b>1,193,326</b>	<b>381,775</b>		<b>37,969,395</b>	<b>1,117,930</b>

		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Solid Waste	Community Solid Waste	0	346,325 t	N/A	140,567	0	286,712 t	N/A	135,995
	<b>Totals</b>	<b>0</b>			<b>140,567</b>	<b>0</b>			<b>135,995</b>

### Memo Items

		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Buildings	Large Industrial	242	6,913,969 GJ	6,913,969	346,805	203	6,309,510 GJ	6,309,510	316,485
		11		0	0	12	125,002,507 kWh	450,009	3,125
<b>Totals</b>		<b>253</b>		<b>6,913,969</b>	<b>346,805</b>	<b>215</b>		<b>6,759,519</b>	<b>319,610</b>

## Vancouver City 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: 610,136)			2010 (Population: 642,843)		
	Consumption	Energy (GJ)	CO <sub>2</sub> e (t)	Consumption	Energy (GJ)	CO <sub>2</sub> e (t)
Hybrid	1,768,125 L	61,884	4,153	5,174,935 L	182,281	11,641
Gasoline	428,019,638 L	14,980,689	1,016,423	424,605,779 L	14,862,861	956,017
Diesel Fuel	38,116,585 L	1,459,864	102,762	39,840,352 L	1,525,887	104,284
Other Fuel	1,908,708 L	48,290	2,927	1,062,209 L	26,873	1,624
Natural Gas	21,322,959 GJ	21,322,959	1,069,560	19,767,143 GJ	19,767,143	991,521
Electricity	4,950,470,807 kWh	17,821,681	123,766	5,056,185,272 kWh	18,202,252	126,409
Solid Waste	346,325 t	0	140,567	286,712 t	0	135,995
<b>Grand Totals</b>		<b>55,695,367</b>	<b>2,460,158</b>		<b>54,567,297</b>	<b>2,327,491</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	65,415	23	65,390	28	48,365	19
Semi-Detached House	3,245	1	3,910	2	3,760	1
Row House	6,935	2	7,295	3	8,230	3
Apartment, Duplex	25,660	9	27,650	12	42,765	17
Apartment, 5 storeys or higher	41,525	15	51,375	22	61,330	24
Apartment, under 5 storeys	75,195	26	79,755	34	88,180	35
Other Single Attached House	455	0	495	0	465	0
Movable Dwelling	105	0	225	0	120	0

**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	130,345	55	146,525	58	144,480	52
Car, Truck, Van as Passenger	14,460	6	17,065	7	17,150	6
Public Transit	56,030	24	43,625	17	70,475	25
Walked	25,260	11	32,465	13	34,245	12
Bicycle	7,720	3	10,340	4	10,415	4
Motorcycle	540	0	540	0	870	0
Taxicab	605	0	840	0	690	0
Other Method	1,725	1	1,915	1	2,220	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	0	0
Local Parks	1,142	10
Agricultural Land Reserve	297	3
Other land use	10,206	88
Total Parks and Protected Area	1,142	10
Total Land Area	11,644	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	0	0
Local Parks	1,142	10
Agricultural Land Reserve	297	3
Other land use	10,206	88
Total Parks and Protected Area	1,142	10
Total Land Area	11,644	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	122,085	50
5 to 9.9 km	82,155	33
25 km or more	6,265	3
15 to 24.9 km	11,200	5
10 to 14.9 km	23,955	10

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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,