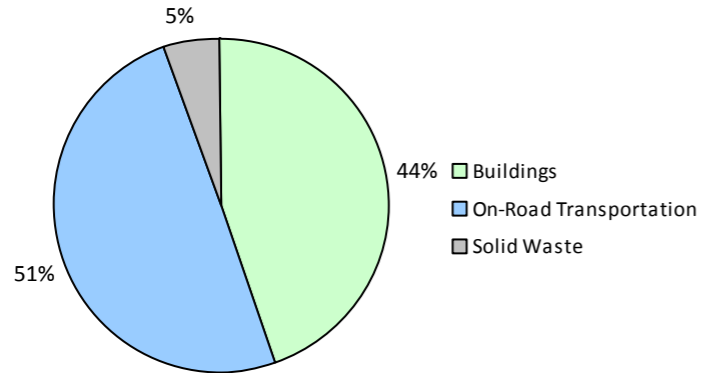


## Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

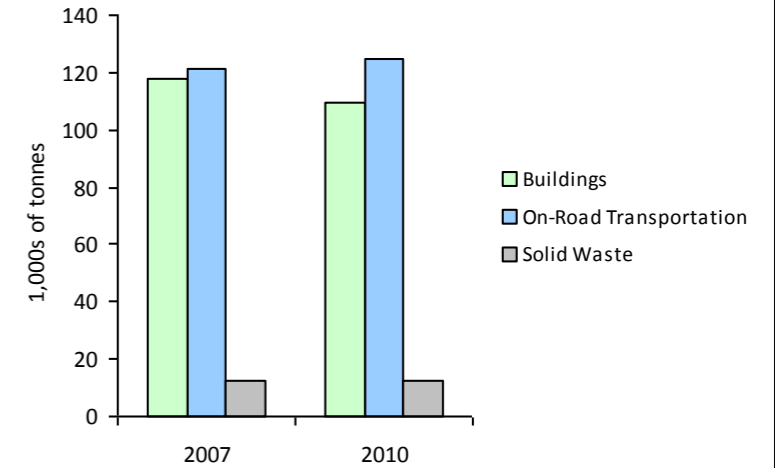
**2010 GHG Emissions Sources (Total for this Community)**



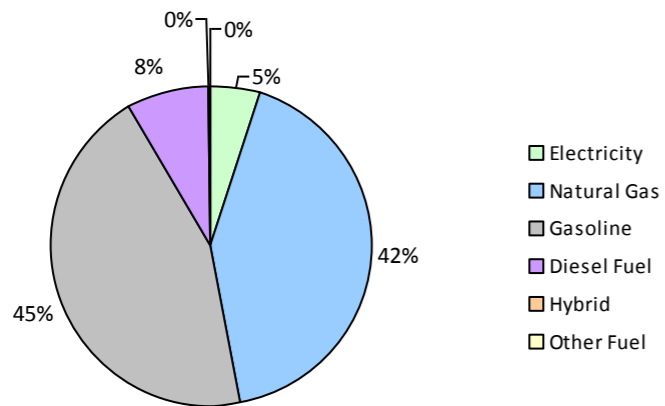
**2010 GHG Emissions Sources (Total for BC)**



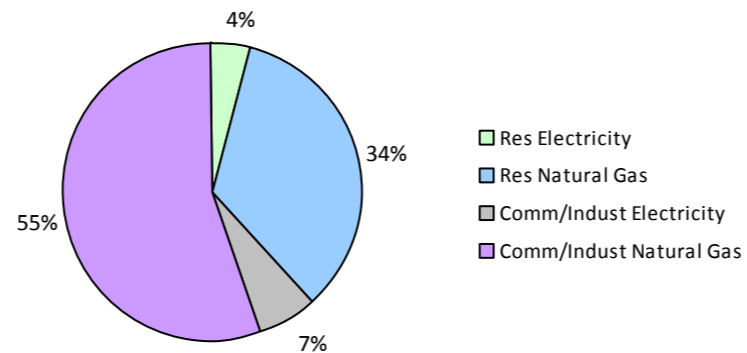
**GHG Emissions Comparisons for this Community**



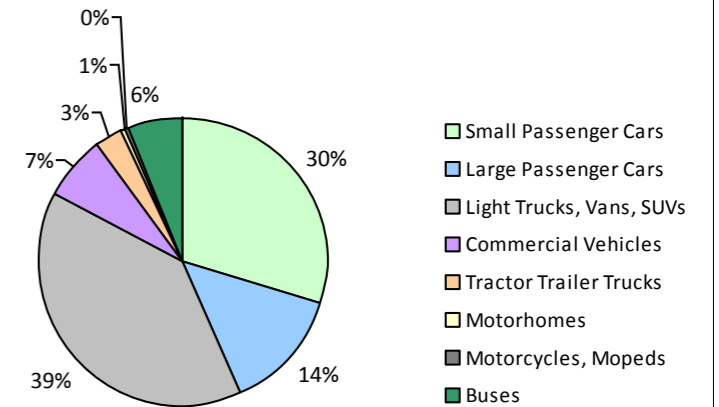
**2010 Total Emissions by Fuel Type**



**2010 Building Emissions by Subsector**



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



## New Westminster 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)	CO <sub>2</sub> e (t)	Connections	Consumption	Avg VKT (km)	Energy (GJ)	CO <sub>2</sub> e (t)
Small Passenger Cars	Hybrid	21	14,400 L	14,800	504	34	29	23,689 L	16,100	829	52
	Gasoline	12,545	16,115,569 L	13,500	564,044	38,252	12,744	16,123,123 L	13,300	564,310	36,164
	Diesel Fuel	231	259,418 L	16,700	9,936	708	221	250,996 L	16,700	9,614	665
	Other Fuel							17,100	121	7	
Large Passenger Cars	Hybrid	51	73,913 L	42,900	2,588	173	131	202,307 L	27,700	7,080	452
	Gasoline	5,075	7,657,709 L	13,100	268,019	18,161	4,930	7,247,748 L	12,900	253,671	16,265
	Diesel Fuel	61	71,725 L	12,100	2,746	196	65	77,101 L	12,400	2,954	204
	Other Fuel			10,100	273	17		9,100	125	8	
Light Trucks, Vans, SUVs	Hybrid	17	23,150 L	17,400	810	55	51	74,926 L	17,200	2,621	170
	Gasoline	9,523	19,775,765 L	14,900	692,152	47,227	10,482	21,165,763 L	14,600	740,801	47,924
	Diesel Fuel	178	419,509 L	13,900	16,066	1,143	145	364,883 L	16,000	13,975	966
	Other Fuel	50	97,931 L	11,700	2,477	150	28	47,648 L	10,200	1,205	73
Commercial Vehicles	Gasoline	549	1,419,889 L	15,600	49,696	3,334	605	1,591,919 L	15,800	55,716	3,561
	Diesel Fuel	528	1,889,777 L	17,800	72,379	5,085	590	2,063,706 L	17,800	79,040	5,388
	Other Fuel	37	76,085 L	11,300	1,924	117	29	56,334 L	10,700	1,425	86
Tractor Trailer Trucks	Gasoline			14,500	178	12					
	Diesel Fuel	154	1,611,374 L	26,100	61,715	4,336	136	1,445,049 L	26,700	55,345	3,773
	Other Fuel			11,000	75	4					
Motorhomes	Gasoline	131	302,925 L	16,600	10,603	709	119	274,109 L	16,600	9,594	608
	Diesel Fuel	47	141,135 L	16,800	5,405	380	48	149,993 L	16,800	5,745	391
	Other Fuel			16,400	62	4		18,800	145	9	
Motorcycles, Mopeds	Gasoline	477	111,915 L	5,200	3,916	261	565	154,241 L	6,100	5,398	342
Buses	Gasoline	31	144,303 L	30,500	5,049	339	41	185,828 L	29,300	6,505	415
	Diesel Fuel	17	145,182 L	33,900	5,561	391	359	2,696,474 L	36,000	103,275	7,041
	Other Fuel			20,800	114	8		15,500	166	11	
<b>Totals</b>		<b>29,723</b>	<b>50,351,674 L</b>	<b>14,048</b>	<b>1,776,292</b>	<b>121,096</b>	<b>31,318</b>	<b>50,351,674 L</b>	<b>14,131</b>	<b>1,919,660</b>	<b>124,575</b>

## New Westminster City 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	8,059	825,179 GJ	825,179	41,391	8,166	734,406 GJ	734,406	36,837
	Electricity	27,152	182,356,848 kWh	656,484	4,559	28,763	191,047,444 kWh	687,770	4,776
Commercial/Small-Medium Industrial	Natural Gas	1,342	1,282,407 GJ	1,282,407	64,326	1,311	1,213,696 GJ	1,213,696	60,879
	Electricity	3,190	288,976,308 kWh	1,040,314	7,225	2,669	286,663,929 kWh	1,031,989	7,167
<b>Totals</b>		<b>39,743</b>		<b>3,804,384</b>	<b>117,501</b>	<b>40,909</b>		<b>3,667,861</b>	<b>109,659</b>

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Community Solid Waste	Solid Waste	0	33,988 t	N/A	12,239	0	26,966 t	N/A	12,790
<b>Totals</b>		<b>0</b>			<b>12,239</b>	<b>0</b>			<b>12,790</b>

### Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Large Industrial	Natural Gas	33		0	0	25		0	0
	Electricity	5		0	0	3		0	0
<b>Totals</b>		<b>38</b>			<b>0</b>	<b>28</b>			<b>0</b>

## New Westminster 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: 61,778)			2010 (Population: 66,892)		
	Consumption	Energy (GJ)	CO2e (t)	Consumption	Energy (GJ)	CO2e (t)
Hybrid	111,463 L	3,902	262	300,922 L	10,530	674
Gasoline	45,528,075 L	1,593,657	108,295	46,742,731 L	1,635,995	105,279
Diesel Fuel	4,538,120 L	173,808	12,239	7,048,202 L	269,948	18,428
Other Fuel	174,016 L	4,925	300	103,982 L	3,187	194
Natural Gas	2,107,586 GJ	2,107,586	105,717	1,948,102 GJ	1,948,102	97,716
Electricity	471,333,156 kWh	1,696,798	11,784	477,711,373 kWh	1,719,759	11,943
Solid Waste	33,988 t	0	12,239	26,966 t	0	12,790
<b>Grand Totals</b>		<b>5,580,676</b>	<b>250,836</b>		<b>5,587,521</b>	<b>247,024</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	6,020	20	6,170	24	4,945	18
Semi-Detached House	210	1	200	1	115	0
Row House	345	1	705	3	970	4
Apartment, Duplex	1,275	4	2,005	8	3,030	11
Apartment, 5 storeys or higher	6,255	21	6,405	25	6,970	26
Apartment, under 5 storeys	9,360	32	10,395	40	10,905	40
Other Single Attached House	35	0	115	0	55	0
Movable Dwelling	40	0	40	0	50	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	15,765	66	17,260	64	18,390	60
Car, Truck, Van as Passenger	1,400	6	1,530	6	1,485	5
Public Transit	4,815	20	5,395	20	8,155	27
Walked	1,595	7	1,995	7	1,870	6
Bicycle	205	1	275	1	250	1
Motorcycle	70	0	50	0	80	0
Taxicab	55	0	50	0	60	0
Other Method	155	1	210	1	200	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	102	6
Agricultural Land Reserve	0	0
Other land use	1,754	95
Total Parks and Protected Area	102	6
Total Land Area	1,856	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	102	6
Agricultural Land Reserve	0	0
Other land use	1,754	95
Total Parks and Protected Area	102	6
Total Land Area	1,856	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	7,625	29
5 to 9.9 km	6,695	25
25 km or more	565	2
15 to 24.9 km	7,435	28
10 to 14.9 km	4,070	15

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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,