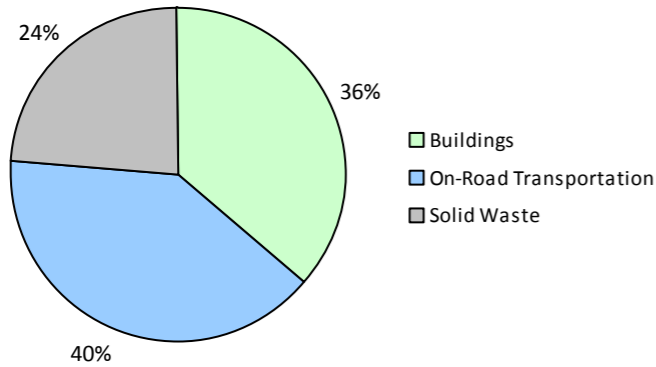
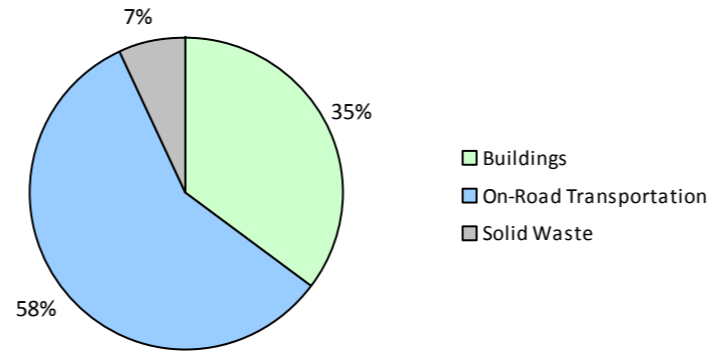


## Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

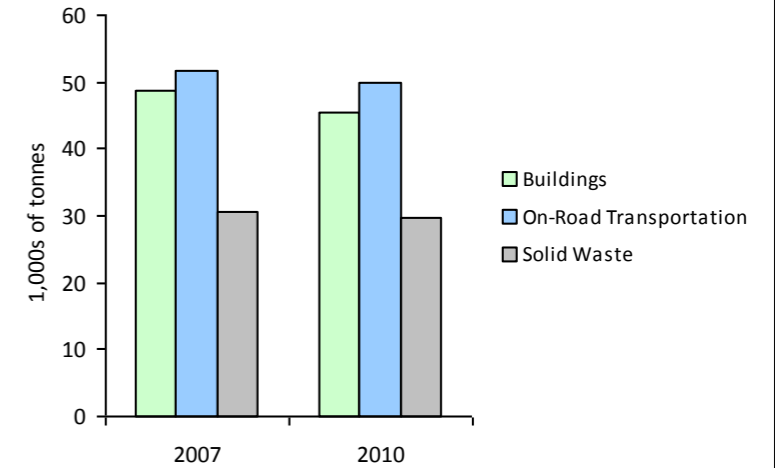
2010 GHG Emissions Sources (Total for this Community)



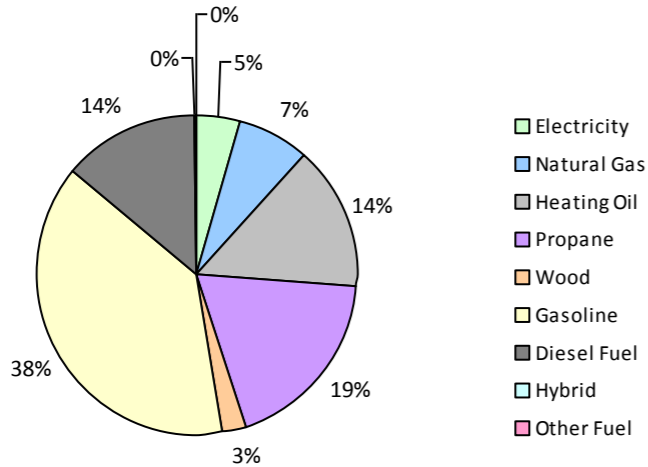
2010 GHG Emissions Sources (Total for BC)



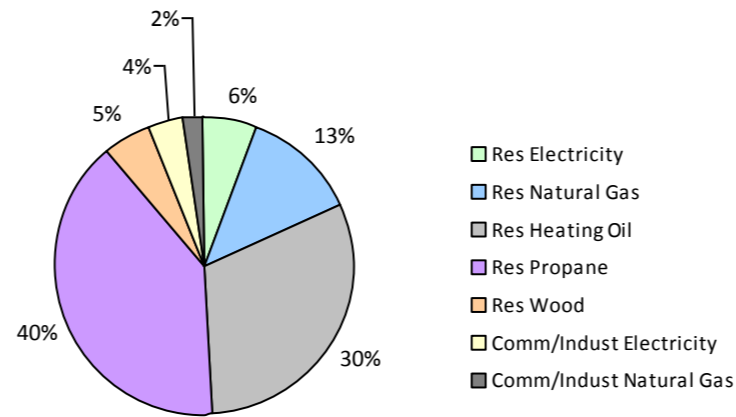
GHG Emissions Comparisons for this Community



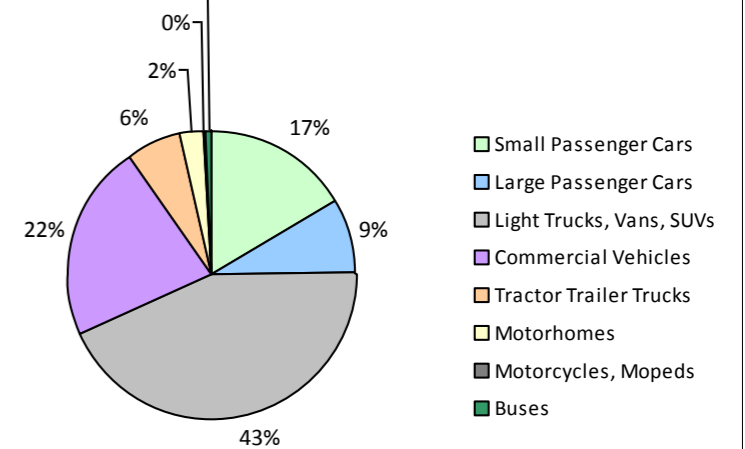
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



## Fraser Valley Regional District Unincorporated Areas 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							18,700	188	11	
	Gasoline	2,595	3,735,750 L	16,300	130,751	8,895	2,448	3,481,651 L	16,100	121,858	7,834
	Diesel Fuel	111	159,866 L	23,500	6,121	437	109	158,181 L	22,600	6,059	419
Large Passenger Cars	Hybrid	12	13,129 L	20,000	459	31	21	22,779 L	20,500	797	50
	Gasoline	1,330	2,048,759 L	14,800	71,706	4,878	1,214	1,861,245 L	14,800	65,142	4,189
	Diesel Fuel	22	26,826 L	12,100	1,029	74	21	19,706 L	11,900	756	53
	Other Fuel			12,100	32	4					
Light Trucks, Vans, SUVs	Hybrid			20,700	62	4			20,500	363	22
	Gasoline	3,922	8,911,208 L	17,200	311,891	21,337	4,056	9,103,933 L	17,000	318,638	20,659
	Diesel Fuel	137	324,446 L	14,400	12,428	885	112	297,634 L	17,400	11,399	788
	Other Fuel	14	26,186 L	12,100	663	42	10	15,729 L	10,700	398	24
Commercial Vehicles	Gasoline	646	1,502,896 L	15,500	52,601	3,527	628	1,420,143 L	15,500	49,705	3,175
	Diesel Fuel	674	2,278,503 L	19,400	87,266	6,132	789	3,019,553 L	22,100	115,648	7,883
	Other Fuel	30	60,322 L	11,800	1,526	92	15	30,273 L	11,500	767	46
Tractor Trailer Trucks	Gasoline			13,800	208	14			16,600	391	25
	Diesel Fuel	135	1,374,513 L	46,500	52,645	3,699	139	1,222,195 L	47,600	46,812	3,191
Motorhomes	Gasoline	117	289,030 L	17,500	10,117	675	119	294,358 L	17,500	10,303	656
	Diesel Fuel	74	241,162 L	17,200	9,235	649	60	201,325 L	17,100	7,711	526
	Other Fuel			17,200	153	9			17,500	126	7
Motorcycles, Mopeds	Gasoline	208	47,624 L	5,300	1,665	111	224	61,642 L	6,100	2,157	137
Buses	Gasoline			17,900	683	45	10	20,599 L	16,300	720	47
	Diesel Fuel	15	70,186 L	18,800	2,689	189	18	87,014 L	19,200	3,333	228
	Other Fuel			12,700	169	10			11,100	129	8
<b>Totals</b>		<b>10,042</b>	<b>21,110,406 L</b>	<b>16,842</b>	<b>754,099</b>	<b>51,739</b>	<b>9,993</b>	<b>21,110,406 L</b>	<b>17,059</b>	<b>763,400</b>	<b>49,978</b>

## Fraser Valley Regional District Unincorporated Areas 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)
Residential	Wood	N/A	128,617 GJ	128,617	2,606	N/A	119,808 GJ	119,808	2,427
	Heating Oil	N/A	215,635 GJ	215,635	15,200	N/A	200,867 GJ	200,867	13,737
	Propane	N/A	318,810 GJ	318,810	19,451	N/A	296,975 GJ	296,975	18,118
	Natural Gas	1,706	125,356 GJ	125,356	6,288	1,702	114,100 GJ	114,100	5,723
	Electricity	7,612	104,447,701 kWh	376,011	2,612	8,035	108,886,260 kWh	391,990	2,723
Commercial/Small-Medium Industrial	Natural Gas	81	17,424 GJ	17,424	874	81	17,689 GJ	17,689	887
	Electricity	1,096	71,587,715 kWh	257,716	1,790	1,154	68,911,775 kWh	248,082	1,724
<b>Totals</b>		<b>10,495</b>		<b>1,439,569</b>	<b>48,821</b>	<b>10,972</b>		<b>1,389,511</b>	<b>45,339</b>

		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Community Solid Waste	Solid Waste	0	21,934 t	N/A	30,685	0	16,342 t	N/A	29,691
<b>Totals</b>		<b>0</b>			<b>30,685</b>	<b>0</b>			<b>29,691</b>

### Memo Items

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

## Fraser Valley Regional District Unincorporated Areas 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: 17,364)			2010 (Population: 17,768)		
	Consumption	Energy (GJ)	CO2e (t)	Consumption	Energy (GJ)	CO2e (t)
Hybrid	13,129 L	521	35	22,779 L	1,348	83
Gasoline	16,535,267 L	579,622	39,482	16,243,571 L	568,914	36,722
Diesel Fuel	4,475,502 L	171,413	12,065	5,005,608 L	191,718	13,088
Other Fuel	86,508 L	2,543	157	46,002 L	1,420	85
Wood	128,617 GJ	128,617	2,606	119,808 GJ	119,808	2,427
Heating Oil	215,635 GJ	215,635	15,200	200,867 GJ	200,867	13,737
Propane	318,810 GJ	318,810	19,451	296,975 GJ	296,975	18,118
Natural Gas	142,780 GJ	142,780	7,162	131,789 GJ	131,789	6,610
Electricity	176,035,416 kWh	633,727	4,402	177,798,035 kWh	640,072	4,447
Solid Waste	21,934 t	0	30,685	16,342 t	0	29,691
<b>Grand Totals</b>		<b>2,193,668</b>	<b>131,245</b>		<b>2,152,911</b>	<b>125,008</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	4,520	8	5,125	84	5,275	78
Semi-Detached House	55	0	100	2	115	2
Row House	35	0	50	1	50	1
Apartment, Duplex	15	0	45	1	45	1
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	55	0	35	1	30	0
Other Single Attached House	0	0	25	0	25	0
Movable Dwelling	730	1	690	11	1,195	18

#### 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	3,790	82	4,305	82	5,220	82
Car, Truck, Van as Passenger	400	9	410	8	535	8
Public Transit	65	1	55	1	80	1
Walked	310	7	380	7	415	7
Bicycle	15	0	45	1	45	1
Motorcycle	10	0	5	0	10	0
Taxicab	10	0	0	0	0	0
Other Method	40	1	60	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	292,992	24
Local Parks	957	0
Agricultural Land Reserve	18,880	2
Other land use	928,456	75
Total Parks and Protected Area	293,950	24
Total Land Area	1,241,285	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	292,992	24
Local Parks	957	0
Agricultural Land Reserve	18,880	2
Other land use	928,456	75
Total Parks and Protected Area	293,950	24
Total Land Area	1,241,285	100

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

**Fraser Valley Regional District Unincorporated Areas**  
**2010 Community Energy and Emissions Inventory**  
*Monitoring and reporting on progress towards greenhouse gas emissions reduction targets*

This page  
intentionally left  
blank

### 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,