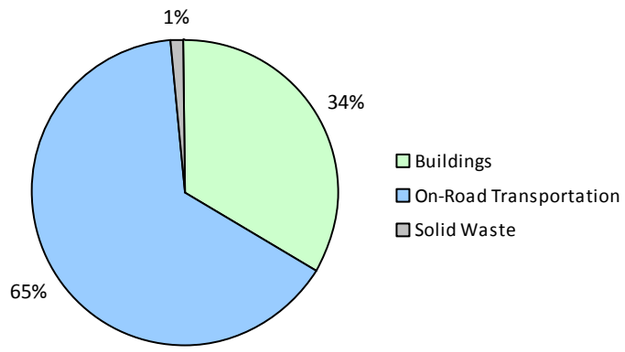
Abbotsford City

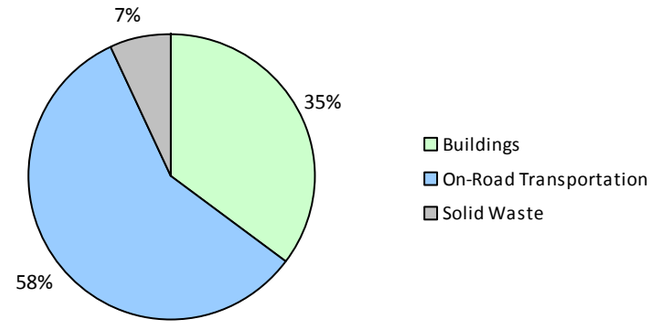
2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

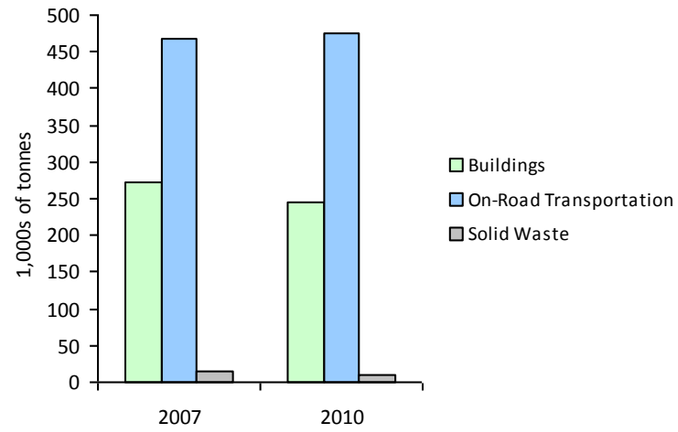
2010 GHG Emissions Sources (Total for this Community)



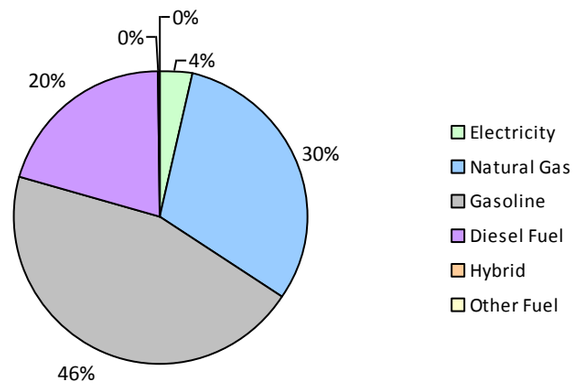
2010 GHG Emissions Sources (Total for BC)



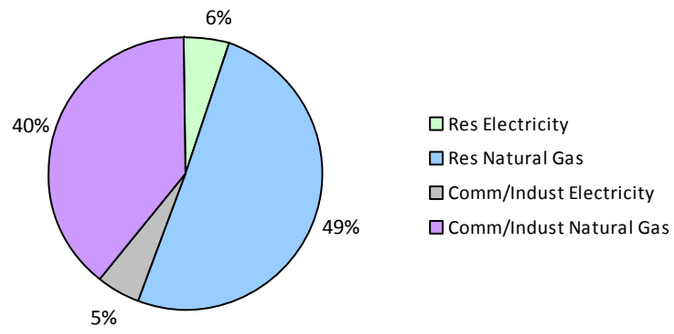
GHG Emissions Comparisons for this Community



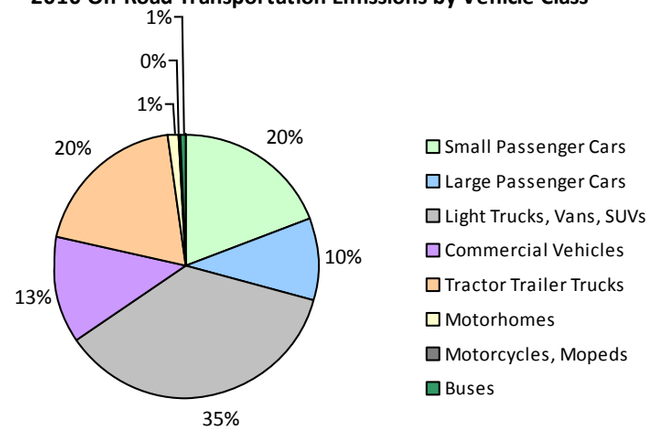
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



Abbotsford City

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Core Items

On-Road Transportation		2007					2010				
		Connections	Consumption	Avg VKT (km)	Energy (GJ)	C02e (t)	Connections	Consumption	Avg VKT (km)	Energy (GJ)	C02e (t)
Small Passenger Cars	Hybrid	30	27,083 L	19,600	948	64	52	47,309 L	18,700	1,656	106
	Gasoline	25,807	40,244,913 L	16,600	1,408,572	95,491	26,174	40,015,968 L	16,300	1,400,560	89,772
	Diesel Fuel	713	1,161,289 L	23,900	44,478	3,171	750	1,151,179 L	22,500	44,090	3,052
	Other Fuel			20,300	128	7			17,600	155	8
Large Passenger Cars	Hybrid	38	42,903 L	20,800	1,502	100	155	193,100 L	21,600	6,759	430
	Gasoline	11,752	20,478,475 L	15,300	716,747	48,533	11,546	20,121,127 L	15,400	704,241	45,095
	Diesel Fuel	108	124,658 L	12,000	4,774	339	113	124,062 L	11,700	4,752	328
	Other Fuel			13,300	256	16			13,100	43	2
Light Trucks, Vans, SUVs	Hybrid	34	53,879 L	20,500	1,886	128	80	142,048 L	20,400	4,971	320
	Gasoline	26,983	68,270,285 L	17,700	2,389,460	162,833	29,662	73,857,169 L	17,500	2,585,001	167,122
	Diesel Fuel	630	1,594,853 L	14,900	61,083	4,346	533	1,543,068 L	18,200	59,100	4,087
	Other Fuel	99	202,433 L	12,200	5,121	310	46	85,623 L	11,200	2,167	131
Commercial Vehicles	Hybrid								13,500	163	11
	Gasoline	3,055	8,164,867 L	16,200	285,770	19,175	3,136	8,542,486 L	16,500	298,987	19,105
	Diesel Fuel	3,325	12,394,357 L	20,100	474,704	33,352	3,871	16,441,601 L	23,200	629,713	42,928
	Other Fuel	136	301,451 L	12,100	7,626	462	86	189,554 L	12,200	4,796	291
Tractor Trailer Trucks	Gasoline			14,600	1,351	91	10	66,005 L	20,500	2,310	148
	Diesel Fuel	1,597	33,915,056 L	51,200	1,298,946	91,264	1,625	35,853,810 L	53,700	1,373,201	93,612
	Other Fuel			12,500	172	10					
Motorhomes	Gasoline	586	1,476,882 L	17,800	51,692	3,456	561	1,435,036 L	17,900	50,227	3,199
	Diesel Fuel	267	884,991 L	17,300	33,894	2,380	253	867,370 L	17,100	33,220	2,265
	Other Fuel	10	26,724 L	17,200	676	41	10	28,741 L	18,400	728	45
Motorcycles, Mopeds	Gasoline	1,260	307,530 L	5,400	10,763	718	1,407	397,772 L	6,200	13,922	883
Buses	Gasoline	215	611,268 L	18,000	21,394	1,437	195	497,419 L	16,200	17,409	1,114
	Diesel Fuel	81	383,384 L	17,800	14,683	1,032	123	564,480 L	19,000	21,619	1,474
	Other Fuel	16	40,054 L	13,000	1,013	61			11,100	512	31
Totals		**76,742**	**190,707,335 L**	**17,514**	**6,837,639**	**468,817**	**80,388**	**190,707,335 L**	**17,624**	**7,260,302**	**475,559**

Abbotsford 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)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Natural Gas	28,209	2,686,216 GJ	2,686,216	134,741	28,865	2,434,923 GJ	2,434,923	122,136
	Electricity	41,707	538,834,348 kWh	1,939,802	13,471	43,650	551,994,043 kWh	1,987,177	13,800
Commercial/Small-Medium Industrial	Natural Gas	3,417	2,237,409 GJ	2,237,409	112,228	3,372	1,952,888 GJ	1,952,888	97,957
	Electricity	5,525	503,929,269 kWh	1,814,144	12,599	5,850	495,116,899 kWh	1,782,419	12,378
Totals		**78,858**		**8,677,571**	**273,039**	**81,737**		**8,157,407**	**246,271**

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	70,413 t	N/A	14,921	0	37,296 t	N/A	10,985
Totals		**0**			**14,921**	**0**			**10,985**

Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Large Industrial	Natural Gas	64	1,690,511 GJ	1,690,511	84,796	58	1,806,990 GJ	1,806,990	90,639
	Electricity	4		0	0	5	57,001,049 kWh	205,204	1,425
Totals		**68**		**1,690,511**	**84,796**	**63**		**2,012,194**	**92,064**

Abbotsford 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: 131,239)			2010 (Population: 138,179)		
	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	123,865 L	4,336	292	382,457 L	13,549	867
Gasoline	139,554,220 L	4,885,749	331,734	144,932,982 L	5,072,657	326,438
Diesel Fuel	50,458,588 L	1,932,562	135,884	56,545,570 L	2,165,695	147,746
Other Fuel	570,662 L	14,992	907	303,918 L	8,401	508
Natural Gas	4,923,625 GJ	4,923,625	246,969	4,387,811 GJ	4,387,811	220,093
Electricity	1,042,763,617 kWh	3,753,946	26,070	1,047,110,942 kWh	3,769,596	26,178
Solid Waste	70,413 t	0	14,921	37,296 t	0	10,985
Grand Totals		**15,515,210**	**756,777**		**15,417,709**	**732,815**

Abbotsford City

2010 Community Energy and Emissions Inventory

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	19,480	35	20,785	52	19,050	44
Semi-Detached House	720	1	985	2	1,330	3
Row House	3,120	6	3,395	8	3,525	8
Apartment, Duplex	3,190	6	3,740	9	7,885	18
Apartment, 5 storeys or higher	920	2	870	2	1,070	2
Apartment, under 5 storeys	8,545	15	9,745	24	10,070	23
Other Single Attached House	45	0	40	0	30	0
Movable Dwelling	400	1	560	1	595	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	35,405	85	40,855	84	46,265	83
Car, Truck,Van as Passenger	3,750	9	4,460	9	5,980	11
Public Transit	440	1	555	1	780	1
Walked	1,430	3	1,815	4	1,870	3
Bicycle	415	1	485	1	465	1
Motorcycle	45	0	55	0	130	0
Taxicab	15	0	45	0	55	0
Other Method	360	1	315	1	425	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	103	0
Local Parks	1,606	4
Agricultural Land Reserve	27,423	71
Other land use	9,375	24
Total Parks and Protected Area	1,708	4
Total Land Area	38,506	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	103	0
Local Parks	1,606	4
Agricultural Land Reserve	27,423	71
Other land use	9,375	24
Total Parks and Protected Area	1,708	4
Total Land Area	38,506	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	19,805	43
5 to 9.9 km	9,210	20
25 km or more	10,840	23
15 to 24.9 km	3,265	7
10 to 14.9 km	3,160	7

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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

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

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