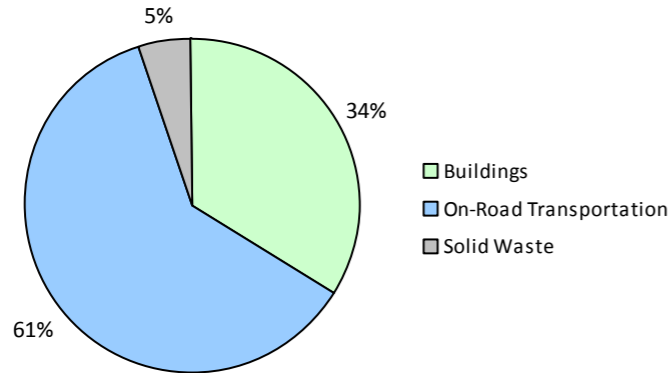


Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

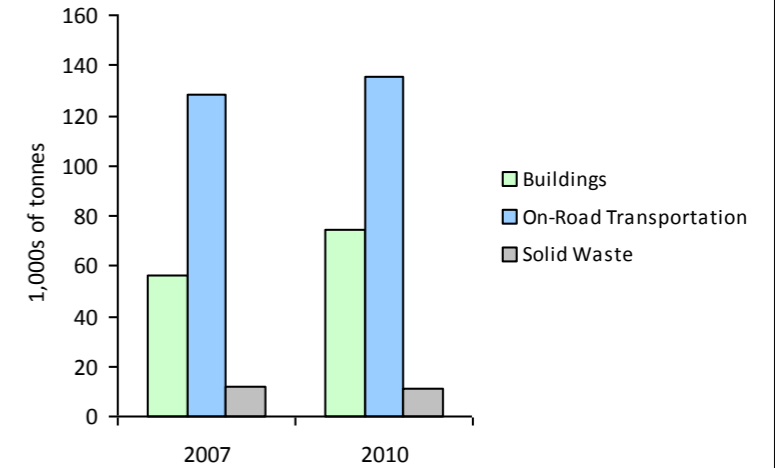
2010 GHG Emissions Sources (Total for this Community)



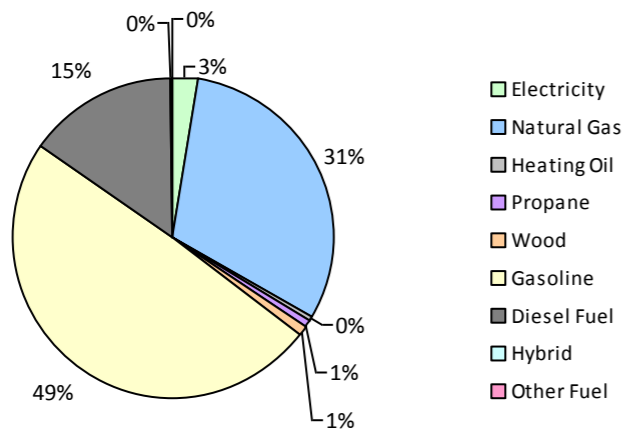
2010 GHG Emissions Sources (Total for BC)



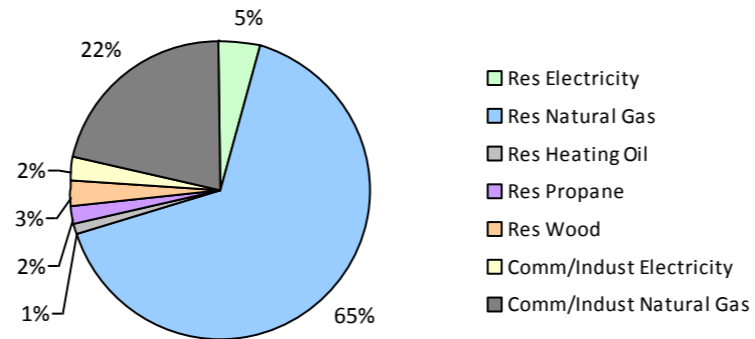
GHG Emissions Comparisons for this Community



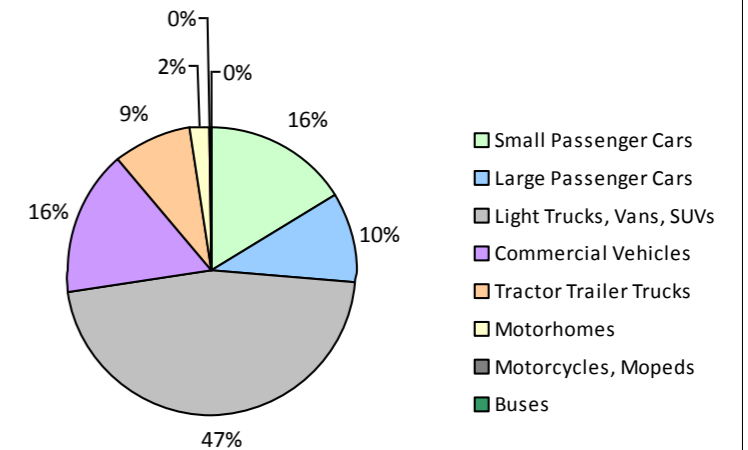
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



West Kelowna District Municipality 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			15,800	131	9	14	17,858 L	23,100	624	40
	Gasoline	5,489	8,747,772 L	16,600	306,172	20,739	5,932	9,546,982 L	16,800	334,144	21,395
	Diesel Fuel	186	325,787 L	26,100	12,478	890	194	315,008 L	24,100	12,065	835
	Other Fuel								24,500	16	1
Large Passenger Cars	Hybrid	19	24,629 L	24,700	862	58	50	67,667 L	24,200	2,369	150
	Gasoline	3,217	6,202,926 L	16,900	217,102	14,700	3,095	5,852,521 L	16,600	204,839	13,127
	Diesel Fuel	45	68,638 L	16,200	2,629	186	39	52,344 L	14,400	2,005	138
	Other Fuel			21,700	80	4					
Light Trucks, Vans, SUVs	Hybrid			23,100	453	30	24	52,201 L	25,100	1,827	117
	Gasoline	8,226	23,218,287 L	19,600	812,640	55,418	9,278	26,511,165 L	19,900	927,891	60,024
	Diesel Fuel	363	999,298 L	15,800	38,272	2,721	272	818,406 L	18,300	31,345	2,165
	Other Fuel	58	124,521 L	12,700	3,150	191	35	69,623 L	11,600	1,761	107
Commercial Vehicles	Hybrid								30,500	126	8
	Gasoline	712	2,627,313 L	22,000	91,956	6,179	856	3,135,270 L	21,800	109,734	7,016
	Diesel Fuel	963	4,482,843 L	25,500	171,692	12,062	1,152	5,814,087 L	27,800	222,680	15,181
	Other Fuel	25	63,305 L	13,100	1,601	98	14	34,130 L	13,100	864	52
Tractor Trailer Trucks	Diesel Fuel	241	4,520,338 L	47,700	173,129	12,165	269	4,688,548 L	43,000	179,571	12,242
Motorhomes	Gasoline	175	500,257 L	19,500	17,510	1,171	201	580,834 L	19,700	20,328	1,294
	Diesel Fuel	114	434,882 L	20,000	16,657	1,170	112	440,545 L	19,800	16,873	1,151
	Other Fuel			17,600	266	16			19,100	211	13
Motorcycles, Mopeds	Gasoline	459	112,532 L	5,400	3,938	263	559	160,398 L	6,300	5,614	356
Buses	Gasoline	15	40,821 L	17,500	1,429	95	13	33,498 L	17,000	1,172	75
	Diesel Fuel			12,700	411	30			12,000	629	43
Totals		20,307	52,494,149 L	18,699	1,872,558	128,195	22,109	52,494,149 L	19,032	2,076,688	135,530

West Kelowna 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	Wood	N/A	106,391 GJ	106,391	2,155	N/A	102,405 GJ	102,405	2,075
	Heating Oil	N/A	14,382 GJ	14,382	1,014	N/A	13,844 GJ	13,844	947
	Propane	N/A	25,366 GJ	25,366	1,548	N/A	24,415 GJ	24,415	1,490
	Natural Gas	8,981	790,832 GJ	790,832	39,669	12,978	968,071 GJ	968,071	48,559
	Electricity	11,385	134,193,773 kWh	483,097	3,355	12,412	145,056,614 kWh	522,203	3,627
Commercial/Small-Medium Industrial	Natural Gas	356	139,802 GJ	139,802	7,012	839	324,265 GJ	324,265	16,265
	Electricity	1,098	70,565,660 kWh	254,036	1,764	1,114	69,341,328 kWh	249,629	1,734
Totals		21,820		1,813,906	56,517	27,343		2,204,832	74,697

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Community Solid Waste	Solid Waste	0	22,921 t	N/A	11,723	0	19,050 t	N/A	11,052
Totals		0			11,723	0			11,052

Memo Items

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

West Kelowna 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: 27,161)			2010 (Population: 27,195)		
	Consumption	Energy (GJ)	CO2e (t)	Consumption	Energy (GJ)	CO2e (t)
Hybrid	24,629 L	1,446	97	137,726 L	4,946	315
Gasoline	41,449,908 L	1,450,747	98,565	45,820,668 L	1,603,722	103,287
Diesel Fuel	10,831,786 L	415,268	29,224	12,128,938 L	465,168	31,755
Other Fuel	187,826 L	5,097	309	103,753 L	2,852	173
Wood	106,391 GJ	106,391	2,155	102,405 GJ	102,405	2,075
Heating Oil	14,382 GJ	14,382	1,014	13,844 GJ	13,844	947
Propane	25,366 GJ	25,366	1,548	24,415 GJ	24,415	1,490
Natural Gas	930,634 GJ	930,634	46,681	1,292,336 GJ	1,292,336	64,824
Electricity	204,759,433 kWh	737,133	5,119	214,397,942 kWh	771,832	5,361
Solid Waste	22,921 t	0	11,723	19,050 t	0	11,052
Grand Totals		3,686,464	196,435		4,281,520	221,279

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

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	0	0	0	0	0	0
Car, Truck, Van as Passenger	0	0	0	0	0	0
Public Transit	0	0	0	0	0	0
Walked	0	0	0	0	0	0
Bicycle	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	0
Taxicab	0	0	0	0	0	0
Other Method	0	0	0	0	0	0

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	512	3
Agricultural Land Reserve	1,176	7
Other land use	14,142	89
Total Parks and Protected Area	512	3
Total Land Area	15,830	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	512	3
Agricultural Land Reserve	1,176	7
Other land use	14,142	89
Total Parks and Protected Area	512	3
Total Land Area	15,830	100

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

West Kelowna 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

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

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,