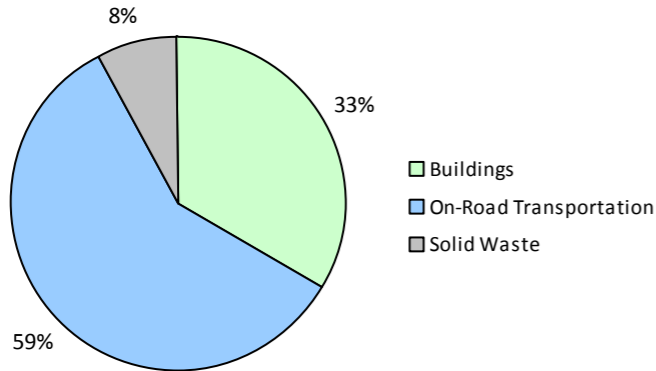


Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

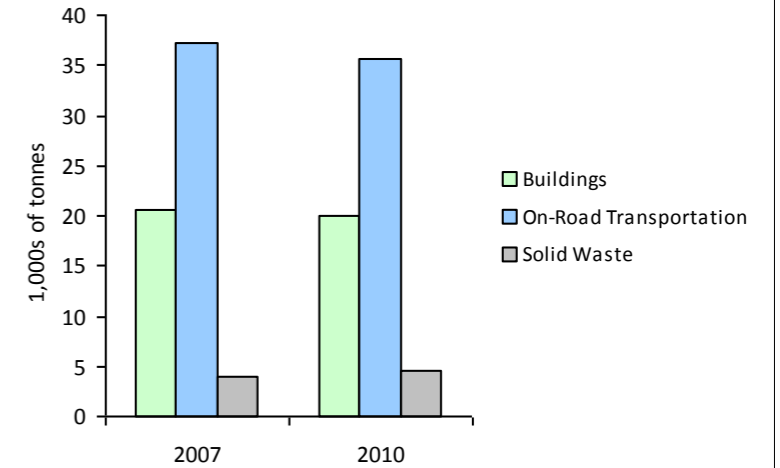
2010 GHG Emissions Sources (Total for this Community)



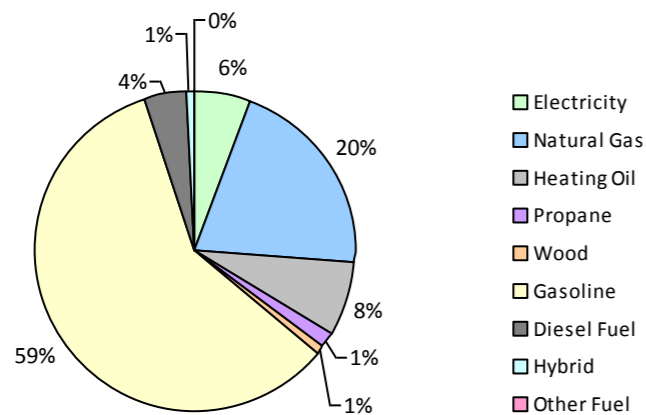
2010 GHG Emissions Sources (Total for BC)



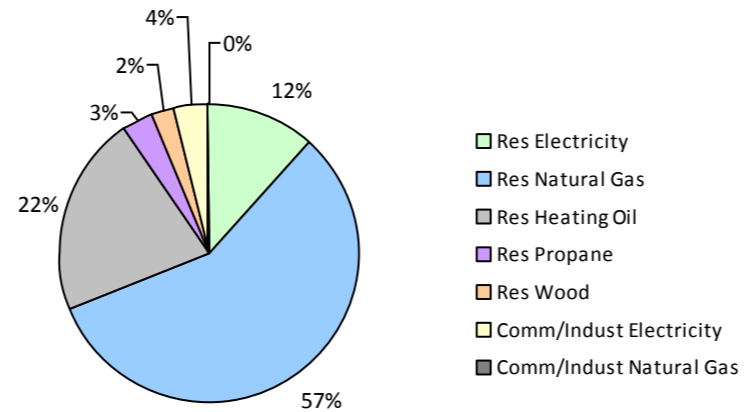
GHG Emissions Comparisons for this Community



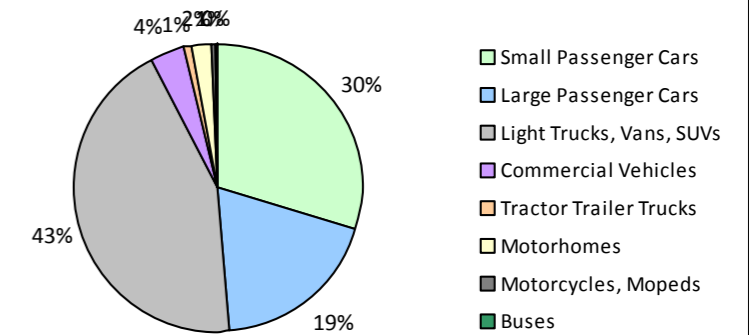
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



Oak Bay District Municipality 2010 Community Energy and Emissions Inventory

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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	16	8,606 L	11,500	301	21	33	19,399 L	11,700	680	44
	Gasoline	4,357	4,488,222 L	10,800	157,088	10,718	4,393	4,510,693 L	10,800	157,875	10,170
	Diesel Fuel	152	137,059 L	13,800	5,250	374	141	125,250 L	13,300	4,796	333
	Other Fuel								10,300	50	4
Large Passenger Cars	Hybrid	40	34,177 L	17,000	1,195	80	95	89,877 L	17,000	3,146	201
	Gasoline	2,407	3,263,336 L	11,900	114,216	7,760	2,216	2,870,825 L	11,400	100,479	6,465
	Diesel Fuel	48	49,463 L	10,700	1,895	136	35	30,943 L	9,200	1,186	82
	Other Fuel			38,800	1,091	66			9,100	61	4
Light Trucks, Vans, SUVs	Hybrid	14	17,301 L	15,600	605	42	42	52,689 L	14,900	1,843	119
	Gasoline	3,326	6,277,984 L	13,500	219,729	14,992	3,577	6,539,461 L	13,200	228,882	14,821
	Diesel Fuel	105	208,924 L	11,600	8,002	568	97	233,929 L	15,600	8,960	618
	Other Fuel	12	19,766 L	9,800	500	31			8,400	151	9
Commercial Vehicles	Gasoline	90	203,649 L	13,600	7,128	478	121	278,847 L	13,900	9,759	624
	Diesel Fuel	68	225,178 L	17,700	8,624	606	83	298,398 L	19,100	11,429	779
	Other Fuel			9,100	216	13			8,300	154	9
Tractor Trailer Trucks	Diesel Fuel	13	87,310 L	16,500	3,344	235	16	100,012 L	15,800	3,831	262
Motorhomes	Gasoline	84	184,353 L	16,000	6,453	430	89	197,805 L	16,300	6,923	440
	Diesel Fuel	46	128,168 L	16,200	4,909	345	41	121,048 L	16,100	4,636	316
	Other Fuel							18,100	68	5	
Motorcycles, Mopeds	Gasoline	265	61,439 L	5,500	2,150	143	325	86,283 L	6,300	3,020	191
Buses	Gasoline	10	23,991 L	15,700	839	56			13,100	511	33
	Diesel Fuel			50,200	681	48			21,600	202	15
	Other Fuel			10,600	53	4			10,300	51	4
Totals		11,053	15,418,926 L	11,940	544,269	37,146	11,304	15,418,926 L	11,849	548,693	35,548

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Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Residential	Wood	N/A	25,469 GJ	25,469	516	N/A	24,655 GJ	24,655	500
	Heating Oil	N/A	66,466 GJ	66,466	4,685	N/A	64,342 GJ	64,342	4,400
	Propane	N/A	11,487 GJ	11,487	701	N/A	11,120 GJ	11,120	678
	Natural Gas	2,805	226,836 GJ	226,836	11,378	3,003	225,675 GJ	225,675	11,320
	Electricity	7,875	102,811,362 kWh	370,121	2,570	7,874	98,393,611 kWh	354,217	2,460
Commercial/Small-Medium Industrial	Natural Gas	155		0	0	150		0	0
	Electricity	533	30,299,196 kWh	109,077	758	566	28,816,854 kWh	103,741	720
Totals		11,368		809,456	20,608	11,593		783,750	20,078

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	CO2e (t)	Connections	Consumption	Energy (GJ)	CO2e (t)
Community Solid Waste	Solid Waste	0	5,850 t	N/A	3,914	0	5,199 t	N/A	4,602
Totals		0			3,914	0			4,602

Totals for Transportation, Buildings and Solid Waste

Fuel Type	2007 (Population: 17,970)			2010 (Population: 18,012)		
	Consumption	Energy (GJ)	CO2e (t)	Consumption	Energy (GJ)	CO2e (t)
Hybrid	60,084 L	2,101	143	161,965 L	5,669	364
Gasoline	14,502,974 L	507,603	34,577	14,483,914 L	507,449	32,744
Diesel Fuel	836,102 L	32,705	2,312	909,580 L	35,040	2,405
Other Fuel	19,766 L	1,860	114	0 L	535	35
Wood	25,469 GJ	25,469	516	24,655 GJ	24,655	500
Heating Oil	66,466 GJ	66,466	4,685	64,342 GJ	64,342	4,400
Propane	11,487 GJ	11,487	701	11,120 GJ	11,120	678
Natural Gas	226,836 GJ	226,836	11,378	225,675 GJ	225,675	11,320
Electricity	133,110,558 kWh	479,198	3,328	127,210,465 kWh	457,958	3,180
Solid Waste	5,850 t	0	3,914	5,199 t	0	4,602
Grand Totals		1,353,725	61,668		1,332,443	60,228

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	5,190	40	5,265	68	4,885	62
Semi-Detached House	100	1	90	1	105	1
Row House	90	1	115	1	110	1
Apartment, Duplex	220	2	220	3	565	7
Apartment, 5 storeys or higher	465	4	465	6	430	5
Apartment, under 5 storeys	1,615	13	1,580	20	1,785	23
Other Single Attached House	20	0	10	0	10	0
Movable Dwelling	0	0	0	0	0	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	4,495	67	4,290	65	4,445	61
Car, Truck, Van as Passenger	470	7	375	6	615	8
Public Transit	655	10	640	10	685	9
Walked	425	6	610	9	650	9
Bicycle	600	9	620	9	760	10
Motorcycle	50	1	25	0	65	1
Taxicab	10	0	0	0	0	0
Other Method	50	1	55	1	85	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	8	1
Local Parks	59	6
Agricultural Land Reserve	89	8
Other land use	900	85
Total Parks and Protected Area	67	6
Total Land Area	1,056	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	8	1
Local Parks	59	6
Agricultural Land Reserve	89	8
Other land use	900	85
Total Parks and Protected Area	67	6
Total Land Area	1,056	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	4,860	72
5 to 9.9 km	1,070	16
25 km or more	295	4
15 to 24.9 km	190	3
10 to 14.9 km	305	5

Oak Bay 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,