

2010 Community Energy and Emissions Inventory

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Core Items

				2007					2010		
On-Road Transportation		Connections	Consumption	Avg VKT (km)	Energy (GJ)	C02e (t)	Connections	Consumption	Avg VKT (km)	Energy (GJ)	C02e (t)
Small Passenger Cars	Hybrid			17,900	97	8			18,100	202	13
	Gasoline	3,562	4,612,737 L	14,800	161,446	11,048	3,461	4,563,062 L	14,800	159,707	10,304
	Diesel Fuel	155	217,706 L	22,000	8,338	594	169	238,069 L	21,200	9,118	631
Large Passenger Cars	Hybrid	10	8,427 L	21,300	295	19	44	59,171 L	22,400	2,071	132
	Gasoline	2,296	3,703,623 L	15,000	129,625	8,858	2,062	3,341,098 L	14,800	116,939	7,539
	Diesel Fuel	36	48,735 L	14,200	1,866	132	29	35,378 L	14,400	1,355	94
Light Trucks, Vans, SUVs	Hybrid			26,800	300	21	16	37,949 L	25,900	1,329	85
	Gasoline	6,057	13,945,169 L	17,600	488,082	33,569	6,480	15,116,097 L	17,500	529,063	34,431
	Diesel Fuel	462	1,105,143 L	13,800	42,327	3,007	355	982,699 L	16,000	37,638	2,597
	Other Fuel	56	117,022 L	12,400	2,961	179	38	72,792 L	11,000	1,842	111
Commercial Vehicles	Gasoline	608	1,682,037 L	18,900	58,870	3,951	658	1,918,485 L	18,900	67,146	4,292
	Diesel Fuel	905	3,455,671 L	23,200	132,353	9,299	1,121	4,913,785 L	25,900	188,197	12,828
	Other Fuel	24	55,835 L	12,400	1,412	88	19	43,508 L	11,500	1,101	66
Tractor Trailer Trucks	Diesel Fuel	147	2,386,065 L	49,500	91,386	6,420	164	3,287,410 L	50,900	125,907	8,584
Motorhomes	Gasoline	219	612,272 L	19,200	21,429	1,431	226	637,899 L	19,300	22,325	1,420
	Diesel Fuel	137	503,228 L	19,700	19,273	1,354	138	539,590 L	19,700	20,666	1,410
	Other Fuel			19,000	555	35			19,800	522	32
Motorcycles, Mopeds	Gasoline	292	60,641 L	5,200	2,121	142	356	87,982 L	6,100	3,079	195
Buses	Gasoline			18,300	719	48			18,100	665	43
	Diesel Fuel	11	48,275 L	17,600	1,849	131	13	56,322 L	27,600	2,156	148
Totals		14,977	32,562,586 L	16,935	1,165,304	80,334	15,349	32,562,586 L	17,349	1,291,028	84,955



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			:	2007				2010	
Buildings		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Wood	N/A	251,715 GJ	251,715	5,100	N/A	242,284 GJ	242,284	4,909
	Heating Oil	N/A	34,014 GJ	34,014	2,398	N/A	32,740 GJ	32,740	2,239
	Propane	N/A	59,970 GJ	59,970	3,659	N/A	57,723 GJ	57,723	3,522
	Natural Gas	3,954	259,178 GJ	259,178	13,001	3,963	241,015 GJ	241,015	12,090
	Electricity	14,492	189,477,007 kWh	682,117	1,159	13,689	184,510,663 kWh	664,238	1,165
Commercial/Small-Medium Industrial	Natural Gas	230	53,318 GJ	53,318	2,675	224	71,845 GJ	71,845	3,605
	Electricity	2,619	91,715,341 kWh	330,175	616	2,621	96,263,040 kWh	346,547	740
Totals		21,295		1,670,487	28,608	20,497		1,656,392	28,270

				2007				2010	
Solid Waste		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	24,104 t	N/A	21,092	0	27,159 t	N/A	24,608
Totals		0			21,092	0			24,608

Memo Items

				2007				2010	
Buildings		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Large Industrial	Natural Gas	5		0	0	4		0	0
	Electricity	1		0	0	1		0	0
Totals		6			0	5			0



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Totals for Transportation, Buildings and Solid Waste

	2007 (Pop	oulation: 24,058)	2010 (Population: 24,410)				
Fuel Type	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)	
Hybrid	8,427 L	692	48	97,120 L	3,602	230	
Gasoline	24,616,479 L	862,292	59,047	25,664,623 L	898,924	58,224	
Diesel Fuel	7,764,823 L	297,392	20,937	10,053,253 L	385,037	26,292	
Other Fuel	172,857 L	4,928	302	116,300 L	3,465	209	
Wood	251,715 GJ	251,715	5,100	242,284 GJ	242,284	4,909	
Heating Oil	34,014 GJ	34,014	2,398	32,740 GJ	32,740	2,239	
Propane	59,970 GJ	59,970	3,659	57,723 GJ	57,723	3,522	
Natural Gas	312,496 GJ	312,496	15,676	312,860 GJ	312,860	15,695	
Electricity	281,192,348 kWh	1,012,292	1,775	280,773,703 kWh	1,010,785	1,905	
Solid Waste	24,104 t	0	21,092	27,159 t	0	24,608	
Grand Totals		2,835,791	130,034		2,947,420	137,833	



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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		200	1	2006	
	Units	%	Units	%	Units	%
Single Detached House	7,795	25	7,670	81	8,375	83
Semi-Detached House	110	0	75	1	130	1
Row House	125	0	160	2	150	1
Apartment, Duplex	95	0	145	2	95	1
Apartment, 5 storeys or higher	0	0	5	0	0	0
Apartment, under 5 storeys	135	0	160	2	130	1
Other Single Attached House	30	0	60	1	45	0
Movable Dwelling	555	2	1,155	12	1,125	11

Parks and Protected Greenspace

Parks and protected greenspaces are important for the protection and enhancement of community carbon sinks.

2009	
Units	%
0	0
136,973	15
141	0
80,077	9
709,469	77
137,114	15
926,659	100
	2009 Units 0 136,973 141 80,077 709,469 137,114 926,659

* 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	136,973	15					
Local Parks	141	0					
Agricultural Land Reserve	80,077	9					
Other land use	709,469	77					
Total Parks and Protected Area	137,114	15					
Total Land Area	926,659	100					
* Net of Crown land, parks, Indian Reserves, water features, airports, ALR waste disposal site							

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	6,250	84	6,050	83	7,170	81
Car, Truck, Van as Passenger	435	6	520	7	835	9
Public Transit	35	0	20	0	50	1
Walked	490	7	445	6	535	6
Bicycle	125	2	95	1	135	2
Motorcycle	10	0	30	0	15	0
Taxicab	0	0	0	0	0	0
Other Method	75	1	145	2	120	1

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Okanagan-Similkameen Regional District Unincorporated Areas 2010 Community Energy and Emissions Inventory

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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) <u>http://www.cscd.gov.bc.ca/lgd/greencommunities/carip.htm</u>, and on the <u>http://toolkit.bc.ca</u> 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.



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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 (<u>http://www.toolkit.bc.ca</u>), 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

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,