

2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets





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# **Core Items**

				2007					2010		
<b>On-Road Transportation</b>		Connections	Consumption	Avg VKT (km)	Energy (GJ)	C02e (t)	Connections	Consumption	Avg VKT (km)	Energy (GJ)	C02e (t)
Small Passenger Cars	Hybrid			15,600	77	5			15,300	208	13
	Gasoline	3,427	4,509,491 L	13,800	157,832	10,675	3,696	4,799,038 L	13,600	167,966	10,750
	Diesel Fuel	84	93,474 L	16,600	3,579	255	89	103,392 L	17,000	3,960	274
	Other Fuel								14,600	71	4
Large Passenger Cars	Hybrid			15,300	250	16	28	26,788 L	15,900	937	59
	Gasoline	1,352	1,990,912 L	12,800	69,683	4,712	1,346	1,938,394 L	12,600	67,844	4,344
	Diesel Fuel	13	17,872 L	14,400	684	50	14	16,005 L	12,200	613	41
	Other Fuel			16,000	54	4			10,000	36	4
Light Trucks, Vans, SUVs	Hybrid			10,700	119	8			16,800	409	26
	Gasoline	3,785	7,891,103 L	15,000	276,188	18,818	4,292	8,741,908 L	14,800	305,966	19,779
	Diesel Fuel	82	197,686 L	14,300	7,571	540	76	206,029 L	17,100	7,890	545
	Other Fuel	12	25,429 L	12,800	643	39			12,900	379	23
Commercial Vehicles	Gasoline	295	736,533 L	15,100	25,778	1,730	351	869,040 L	14,900	30,417	1,943
	Diesel Fuel	364	1,302,156 L	18,000	49,873	3,505	422	1,471,816 L	18,000	56,371	3,843
	Other Fuel	17	36,434 L	11,700	922	55	15	28,654 L	10,600	724	43
Tractor Trailer Trucks	Diesel Fuel	113	1,429,598 L	31,700	54,753	3,847	95	1,274,378 L	33,800	48,808	3,327
	Other Fuel			11,000	75	4					
Motorhomes	Gasoline	57	137,493 L	17,300	4,812	321	61	145,656 L	17,100	5,098	324
	Diesel Fuel	27	83,826 L	16,800	3,210	226	23	77,662 L	17,200	2,974	203
Motorcycles, Mopeds	Gasoline	175	42,753 L	5,500	1,496	100	196	56,032 L	6,400	1,962	125
Buses	Gasoline	14	61,147 L	27,200	2,140	144	18	65,157 L	22,400	2,281	145
	Diesel Fuel	14	103,516 L	26,400	3,965	279	18	112,924 L	23,400	4,325	294
	Other Fuel			18,400	284	17					
Totals		9,831	18,659,423 L	14,467	663,988	45,350	10,740	18,659,423 L	14,329	709,239	46,109



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			20	007				2010	
Buildings		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Natural Gas	4,442	412,287 GJ	412,287	20,681	4,489	362,942 GJ	362,942	18,205
	Electricity	6,473	75,903,693 kWh	273,253	1,898	6,867	77,811,056 kWh	280,120	1,945
Commercial/Small-Medium Industrial	Natural Gas	319	218,222 GJ	218,222	10,946	319	230,832 GJ	230,832	11,579
	Electricity	674	83,788,554 kWh	301,639	2,095	750	77,584,262 kWh	279,303	1,940
Totals		11,908		1,205,401	35,620	12,425		1,153,197	33,669

				2007				2010	
Solid Waste		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	9,782 t	N/A	2,889	0	8,374 t	N/A	3,972
Totals		0			2,889	0			3,972

## Memo Items

				2007				2010	
Buildings		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Large Industrial	Natural Gas	4	140,457 GJ	140,457	7,045	2		0	0
Totals		4		140,457	7,045	2			0

# Totals for Transportation, Buildings and Solid Waste

	2007 (Pop	oulation: 16,582)	2010 (Population: 18,136)			
Fuel Type	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	0 L	446	29	26,788 L	1,554	98
Gasoline	15,369,432 L	537,929	36,500	16,615,225 L	581,534	37,410
Diesel Fuel	3,228,128 L	123,635	8,702	3,262,206 L	124,941	8,527
Other Fuel	61,863 L	1,978	119	28,654 L	1,210	74
Natural Gas	630,509 GJ	630,509	31,627	593,774 GJ	593,774	29,784
Electricity	159,692,247 kWh	574,892	3,993	155,395,318 kWh	559,423	3,885
Solid Waste	9,782 t	0	2,889	8,374 t	0	3,972
Grand Totals		1,869,389	83,859		1,862,436	83,750



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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

### Parks and Protected Greenspace

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

	2009			
	Units	%		
National Parks				
Provincial Parks / Protected Areas				
Local Parks				
Agricultural Land Reserve				
Other land use				
Total Parks and Protected Area				
Total Land Area				
* Total is net of Indian Reserves ** Quantity of parkland may be underestimate	d			

### **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			
Provincial Parks / Protected Areas			
Local Parks			
Agricultural Land Reserve			
Other land use			
Total Parks and Protected Area			
Total Land Area			
* Net of Crown land, parks, Indian Reserves, water features, a	irports, ALR,waste dis	posal site	



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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: <a href="http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html">http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html</a> For guidance on target setting and community actions, go to <a href="http://www.toolkit.bc.ca">http://www.toolkit.bc.ca</a> and </a>

#### 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,