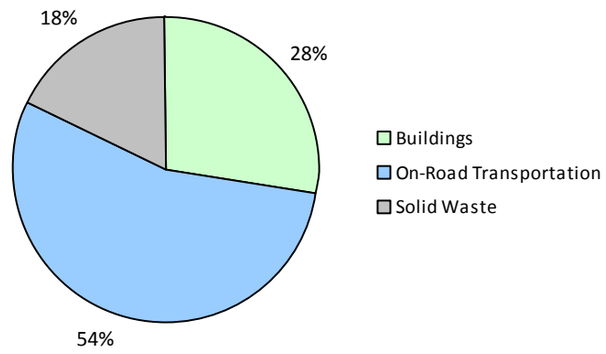
Kitimat District Municipality

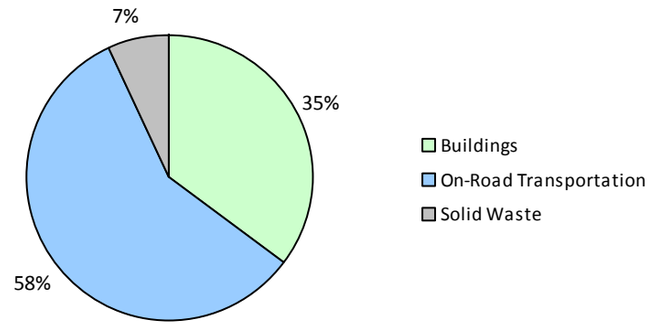
2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

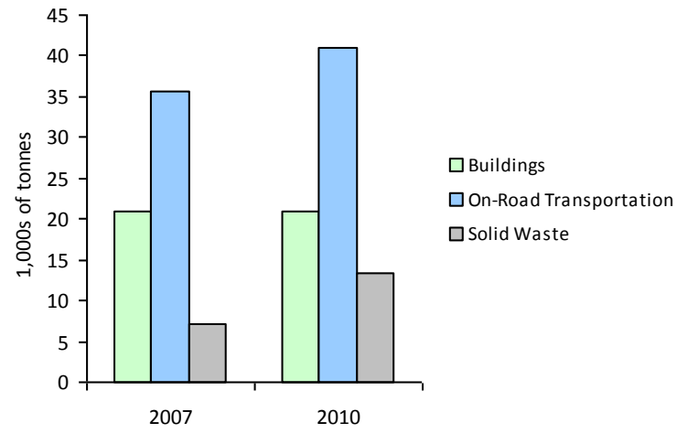
2010 GHG Emissions Sources (Total for this Community)



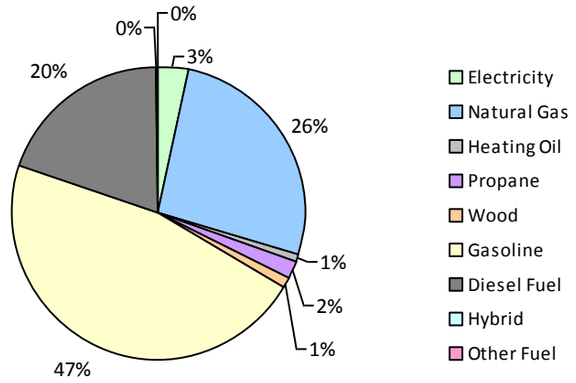
2010 GHG Emissions Sources (Total for BC)



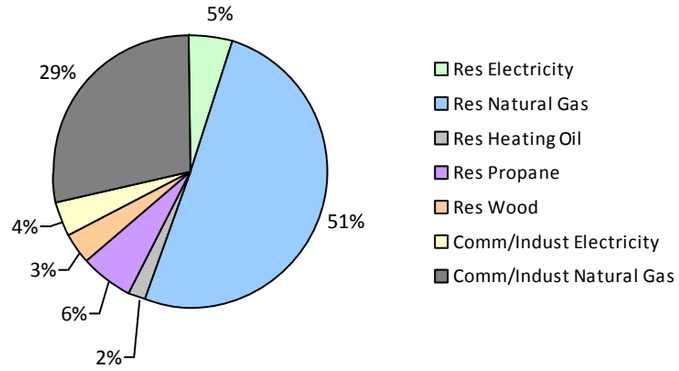
GHG Emissions Comparisons for this Community



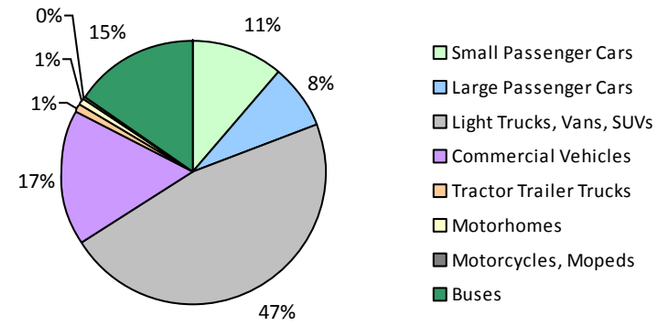
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



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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			18,000	30	2			23,800	172	11
	Gasoline	1,216	2,085,117 L	18,300	72,979	4,937	1,108	1,961,482 L	19,000	68,652	4,391
	Diesel Fuel	54	101,108 L	27,700	3,873	275	47	81,878 L	25,700	3,136	217
Large Passenger Cars	Hybrid			29,000	138	9	10	17,391 L	28,400	609	39
	Gasoline	687	1,587,858 L	20,600	55,575	3,753	635	1,483,466 L	20,800	51,921	3,321
	Diesel Fuel			11,800	378	26			8,900	226	15
Light Trucks, Vans, SUVs	Hybrid								23,000	145	9
	Gasoline	2,709	7,722,109 L	19,400	270,274	18,431	2,691	8,195,646 L	20,900	286,848	18,542
	Diesel Fuel	72	189,061 L	15,100	7,241	516	51	155,400 L	18,500	5,952	412
	Other Fuel	10	24,028 L	13,500	608	37			11,200	458	27
Commercial Vehicles	Gasoline	280	878,193 L	18,300	30,737	2,064	292	975,858 L	19,700	34,155	2,183
	Diesel Fuel	254	1,042,342 L	22,900	39,922	2,805	352	1,766,622 L	28,900	67,661	4,613
	Other Fuel			11,000	382	23			8,100	145	9
Tractor Trailer Trucks	Gasoline			11,100	98	8					
	Diesel Fuel	24	177,104 L	17,800	6,783	477	24	204,709 L	20,300	7,840	535
Motorhomes	Gasoline	24	68,155 L	19,900	2,385	159	30	86,442 L	19,900	3,026	192
	Diesel Fuel	17	62,334 L	20,300	2,388	169	15	52,327 L	19,400	2,004	137
Motorcycles, Mopeds	Gasoline	109	24,649 L	5,000	863	58	135	37,736 L	6,200	1,320	83
Buses	Gasoline	23	58,424 L	14,400	2,044	137	19	52,520 L	15,800	1,839	118
	Diesel Fuel	127	614,085 L	20,900	23,520	1,652	325	2,352,653 L	37,000	90,106	6,142
	Other Fuel			11,300	183	11			11,200	174	10
Totals		**5,606**	**14,634,567 L**	**19,158**	**520,401**	**35,549**	**5,734**	**14,634,567 L**	**21,521**	**626,389**	**41,006**

Kitimat 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)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Wood	N/A	38,224 GJ	38,224	774	N/A	35,634 GJ	35,634	722
	Heating Oil	N/A	8,064 GJ	8,064	568	N/A	7,518 GJ	7,518	514
	Propane	N/A	21,995 GJ	21,995	1,342	N/A	20,505 GJ	20,505	1,251
	Natural Gas	2,773	240,675 GJ	240,675	12,072	2,773	205,899 GJ	205,899	10,328
	Electricity	4,222	46,822,942 kWh	168,562	1,171	4,175	44,803,913 kWh	161,294	1,120
Commercial/Small-Medium Industrial	Natural Gas	230	81,709 GJ	81,709	4,099	230	120,682 GJ	120,682	6,053
	Electricity	510	36,031,207 kWh	129,712	901	517	34,768,819 kWh	125,168	869
Totals		**7,735**		**688,941**	**20,927**	**7,695**		**676,700**	**20,857**

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	4,210 t	N/A	7,125	0	4,926 t	N/A	13,447
Totals		**0**			**7,125**	**0**			**13,447**

Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Large Industrial	Natural Gas	4	3,645,907 GJ	3,645,907	182,879	3	866,521 GJ	866,521	43,465
	Electricity	1		0	0	1		0	0
Totals		**5**		**3,645,907**	**182,879**	**4**		**866,521**	**43,465**

Kitimat 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: 9,095)			2010 (Population: 9,178)		
	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	0 L	168	11	17,391 L	926	59
Gasoline	12,424,505 L	434,955	29,547	12,793,150 L	447,761	28,830
Diesel Fuel	2,186,034 L	84,105	5,920	4,613,589 L	176,925	12,071
Other Fuel	24,028 L	1,173	71	0 L	777	46
Wood	38,224 GJ	38,224	774	35,634 GJ	35,634	722
Heating Oil	8,064 GJ	8,064	568	7,518 GJ	7,518	514
Propane	21,995 GJ	21,995	1,342	20,505 GJ	20,505	1,251
Natural Gas	322,384 GJ	322,384	16,171	326,581 GJ	326,581	16,381
Electricity	82,854,149 kWh	298,274	2,072	79,572,732 kWh	286,462	1,989
Solid Waste	4,210 t	0	7,125	4,926 t	0	13,447
Grand Totals		**1,209,342**	**63,601**		**1,303,089**	**75,310**

Kitimat District Municipality

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	2,470	39	2,370	63	2,280	63
Semi-Detached House	410	6	410	11	455	13
Row House	320	5	380	10	350	10
Apartment, Duplex	35	1	40	1	60	2
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	525	8	440	12	375	10
Other Single Attached House	60	1	0	0	0	0
Movable Dwelling	90	1	150	4	105	3

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	4,155	82	3,945	85	3,415	82
Car, Truck,Van as Passenger	340	7	245	5	365	9
Public Transit	160	3	120	3	85	2
Walked	300	6	260	6	250	6
Bicycle	50	1	0	0	15	0
Motorcycle	15	0	0	0	15	0
Taxicab	20	0	25	1	10	0
Other Method	50	1	40	1	30	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	25	0
Local Parks	463	2
Agricultural Land Reserve	509	2
Other land use	24,655	96
Total Parks and Protected Area	488	2
Total Land Area	25,652	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	25	0
Local Parks	463	2
Agricultural Land Reserve	509	2
Other land use	24,655	96
Total Parks and Protected Area	488	2
Total Land Area	25,652	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	3,455	89
5 to 9.9 km	115	3
25 km or more	200	5
15 to 24.9 km	100	3
10 to 14.9 km	0	0

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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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