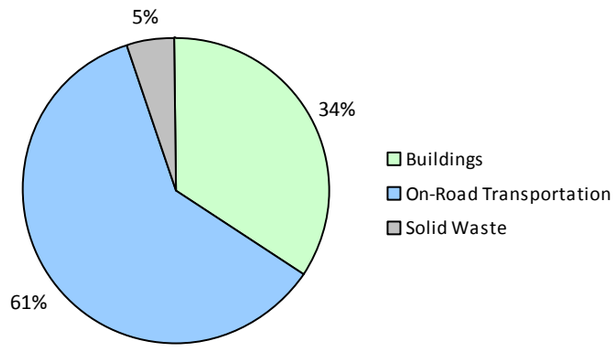
East Kootenay Regional District

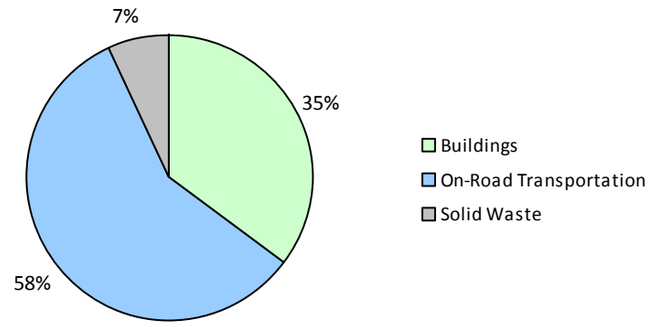
2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

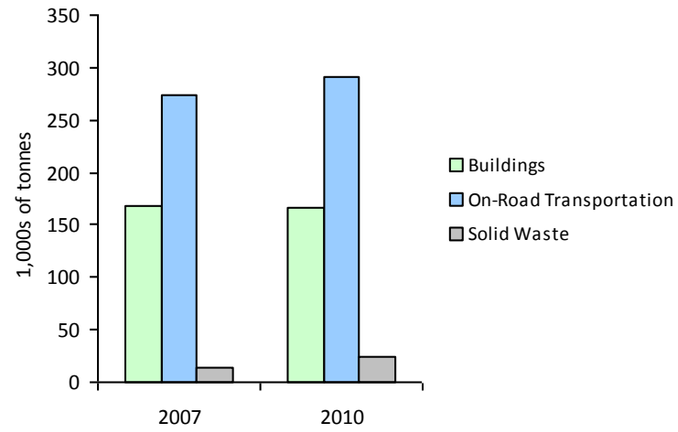
2010 GHG Emissions Sources (Total for this Community)



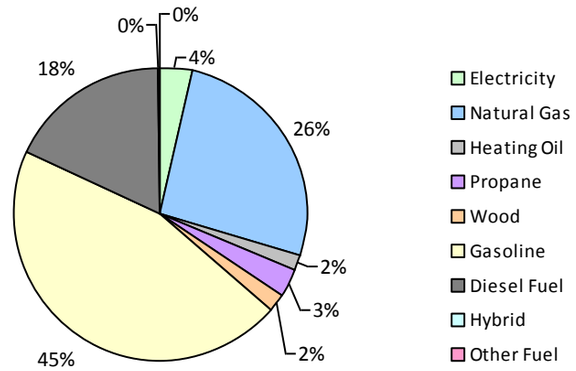
2010 GHG Emissions Sources (Total for BC)



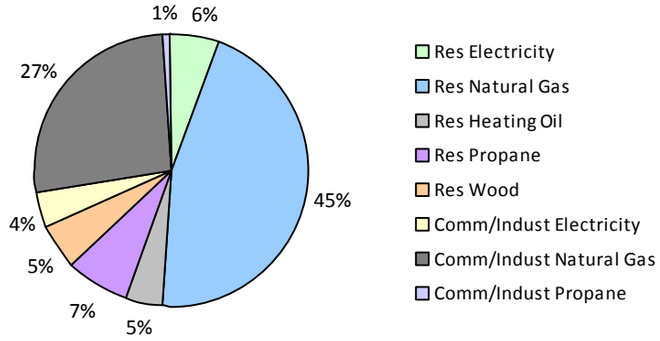
GHG Emissions Comparisons for this Community



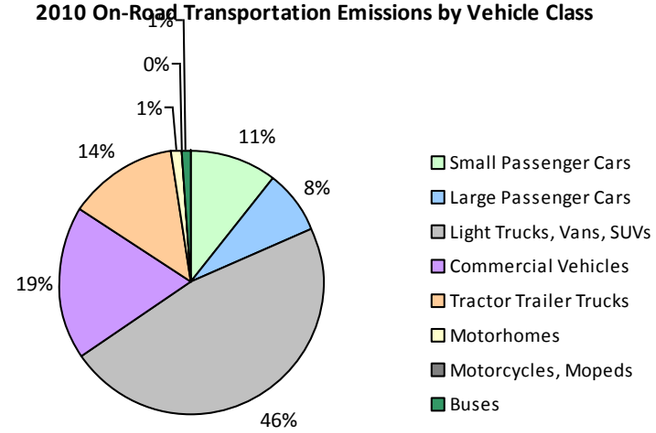
2010 Total Emissions by Fuel Type



2010 Building Emissions by Subsector



2010 On-Road Transportation Emissions by Vehicle Class



East Kootenay Regional District

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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			22,400	214	14	11	11,882 L	21,100	417	26
	Gasoline	8,226	13,015,061 L	16,600	455,528	30,861	8,197	13,236,293 L	17,000	463,270	29,679
	Diesel Fuel	471	846,788 L	25,900	32,432	2,313	460	800,692 L	24,800	30,667	2,124
	Other Fuel								21,800	117	7
Large Passenger Cars	Hybrid	17	20,648 L	21,300	722	48	59	76,245 L	21,500	2,669	170
	Gasoline	5,859	10,264,938 L	15,300	359,273	24,345	5,557	9,875,274 L	15,500	345,634	22,152
	Diesel Fuel	63	86,754 L	14,600	3,323	237	65	85,711 L	14,400	3,283	227
	Other Fuel			16,200	562	34			14,600	171	10
Light Trucks, Vans, SUVs	Hybrid			20,500	227	15	26	57,822 L	24,900	2,024	132
	Gasoline	19,163	50,791,344 L	17,700	1,777,697	121,384	21,099	57,708,831 L	18,500	2,019,809	130,764
	Diesel Fuel	1,071	2,169,693 L	11,300	83,099	5,905	760	1,762,209 L	13,300	67,492	4,659
	Other Fuel	131	264,624 L	11,800	6,696	406	74	141,026 L	11,100	3,568	217
Commercial Vehicles	Hybrid								29,900	920	59
	Gasoline	2,171	6,972,776 L	18,900	244,047	16,391	2,980	10,354,572 L	20,600	362,410	23,171
	Diesel Fuel	2,593	9,165,914 L	19,500	351,054	24,665	3,121	12,359,412 L	22,100	473,365	32,269
	Other Fuel	75	182,689 L	13,200	4,622	280	45	100,423 L	12,300	2,540	154
Tractor Trailer Trucks	Gasoline			13,800	763	51			12,000	695	44
	Diesel Fuel	783	15,099,226 L	45,300	578,300	40,631	773	15,165,280 L	47,200	580,831	39,596
	Other Fuel			14,200	264	16			11,900	250	15
Motorhomes	Gasoline	197	554,172 L	19,400	19,395	1,293	230	664,426 L	19,500	23,254	1,476
	Diesel Fuel	185	572,408 L	16,700	21,923	1,539	176	557,885 L	16,700	21,368	1,457
	Other Fuel	10	29,546 L	19,000	748	45			20,800	489	30
Motorcycles, Mopeds	Gasoline	633	141,109 L	4,800	4,939	329	774	214,526 L	6,000	7,509	476
Buses	Gasoline	109	352,410 L	19,500	12,334	830	127	426,985 L	20,600	14,944	956
	Diesel Fuel	119	643,308 L	19,800	24,639	1,731	128	724,009 L	21,100	27,730	1,891
	Other Fuel			14,400	546	33			14,000	309	17
Totals		**41,876**	**111,173,408 L**	**17,556**	**3,983,347**	**273,396**	**44,662**	**111,173,408 L**	**18,495**	**4,455,735**	**291,778**

East Kootenay Regional District

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	446,876 GJ	446,876	9,054	N/A	430,134 GJ	430,134	8,715
	Heating Oil	N/A	114,776 GJ	114,776	8,091	N/A	110,476 GJ	110,476	7,555
	Propane	164	207,892 GJ	207,892	12,684	181	200,179 GJ	200,179	12,213
	Natural Gas	17,262	1,499,583 GJ	1,499,583	75,220	17,682	1,484,630 GJ	1,484,630	74,469
	Electricity	34,988	362,933,609 kWh	1,306,560	9,074	36,730	382,624,438 kWh	1,377,447	9,566
Commercial/Small-Medium Industrial	Propane	30	35,641 GJ	35,641	2,174	32	23,877 GJ	23,877	1,457
	Natural Gas	1,788	887,071 GJ	887,071	44,494	1,802	896,356 GJ	896,356	44,962
	Electricity	5,079	290,161,033 kWh	1,044,579	7,254	5,266	291,141,271 kWh	1,048,108	7,279
Totals		**59,311**		**5,542,978**	**168,045**	**61,693**		**5,571,207**	**166,216**

Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	55,598 t	N/A	13,678	0	59,215 t	N/A	24,634
Totals		**0**			**13,678**	**0**			**24,634**

Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Large Industrial	Natural Gas	19	116,763 GJ	116,763	5,857	14	76,228 GJ	76,228	3,824
	Electricity	11	577,555,437 kWh	2,079,198	14,439	9	653,905,816 kWh	2,354,059	16,348
Totals		**30**		**2,195,961**	**20,296**	**23**		**2,430,287**	**20,172**

Agriculture		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Enteric Fermentation	Methane	26,345	1,596 t	0	33,516				
Totals		**26,345**			**33,516**	**0**			

Land-use Change - Deforestation		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Settlement	Deforestation	201	0 ha	0	96,612				
Totals		**201**			**96,612**	**0**			

Totals for Transportation, Buildings and Solid Waste

Fuel Type	2007 (Population: 57,031)			2010 (Population: 60,267)		
	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	20,648 L	1,163	77	145,949 L	6,030	387
Gasoline	82,091,810 L	2,873,976	195,484	92,480,907 L	3,237,525	208,718
Diesel Fuel	28,584,091 L	1,094,770	77,021	31,455,198 L	1,204,736	82,223
Other Fuel	476,859 L	13,438	814	241,449 L	7,444	450
Wood	446,876 GJ	446,876	9,054	430,134 GJ	430,134	8,715
Heating Oil	114,776 GJ	114,776	8,091	110,476 GJ	110,476	7,555
Propane	243,533 GJ	243,533	14,858	224,056 GJ	224,056	13,670
Natural Gas	2,386,654 GJ	2,386,654	119,714	2,380,986 GJ	2,380,986	119,431
Electricity	653,094,642 kWh	2,351,139	16,328	673,765,709 kWh	2,425,555	16,845
Solid Waste	55,598 t	0	13,678	59,215 t	0	24,634
Grand Totals		**9,526,325**	**455,119**		**10,026,942**	**482,628**

East Kootenay Regional District

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	15,430	42	16,430	72	14,980	64
Semi-Detached House	665	2	800	3	1,050	4
Row House	665	2	915	4	1,045	4
Apartment, Duplex	410	1	335	1	255	1
Apartment, 5 storeys or higher	0	0	35	0	40	0
Apartment, under 5 storeys	2,530	7	2,415	11	2,605	11
Other Single Attached House	55	0	140	1	60	0
Movable Dwelling	1,965	5	1,880	8	3,380	14

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	17,680	73	18,980	76	20,015	75
Car, Truck,Van as Passenger	2,690	11	2,525	10	3,045	11
Public Transit	300	1	260	1	355	1
Walked	2,520	10	2,170	9	2,160	8
Bicycle	305	1	375	2	495	2
Motorcycle	20	0	25	0	60	0
Taxicab	15	0	0	0	10	0
Other Method	670	3	645	3	560	2

Parks and Protected Greenspace

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

	2009	
	Units	%
National Parks	133,891	5
Provincial Parks / Protected Areas	274,347	10
Local Parks	510	0
Agricultural Land Reserve	266,332	10
Other land use	2,045,200	75
Total Parks and Protected Area	408,748	15
Total Land Area	2,720,280	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	133,891	5
Provincial Parks / Protected Areas	274,347	10
Local Parks	510	0
Agricultural Land Reserve	266,332	10
Other land use	2,045,200	75
Total Parks and Protected Area	408,748	15
Total Land Area	2,720,280	100

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