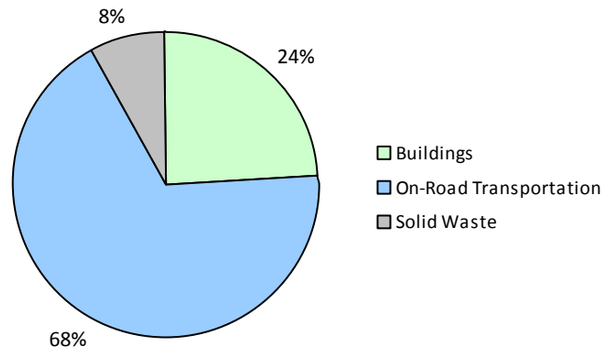
Spallumcheen District Municipality

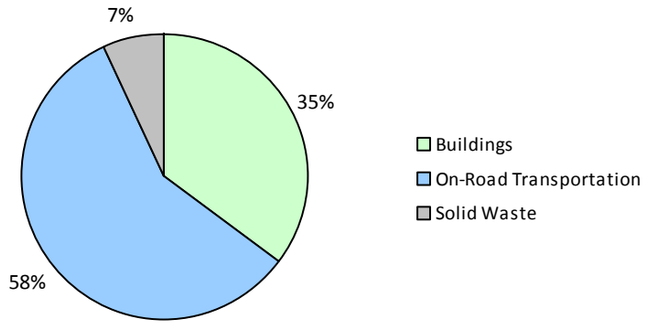
2010 Community Energy and Emissions Inventory

Monitoring and reporting on progress towards greenhouse gas emissions reduction targets

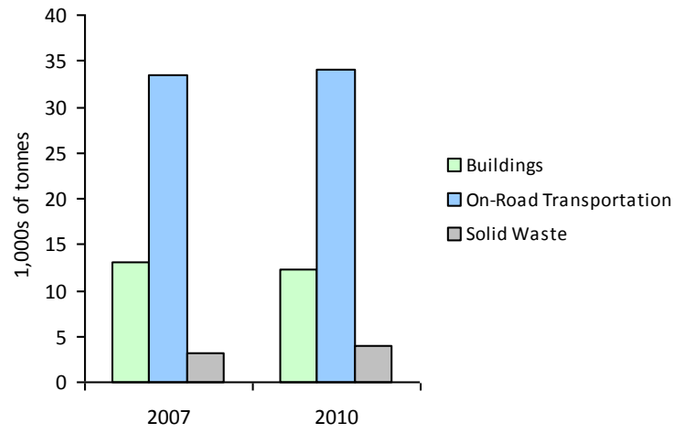
2010 GHG Emissions Sources (Total for this Community)



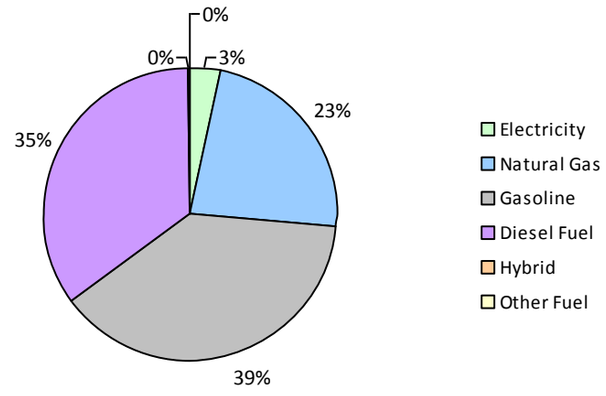
2010 GHG Emissions Sources (Total for BC)



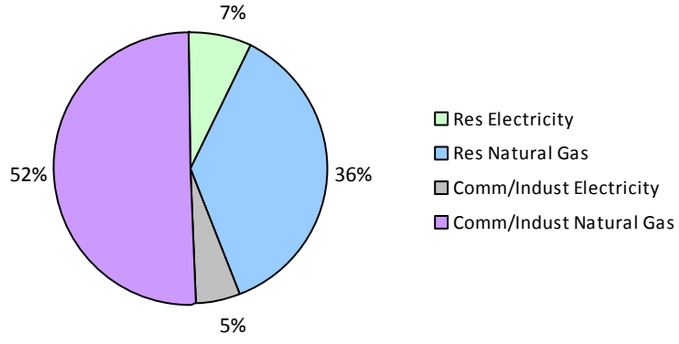
GHG Emissions Comparisons for this Community



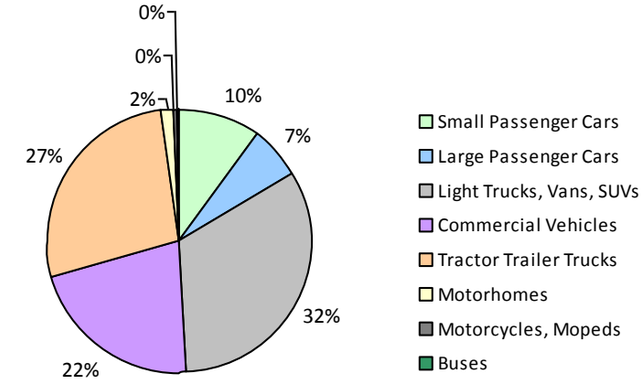
2010 Total Emissions by Fuel Type



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								20,500	73	4
	Gasoline	876	1,356,127 L	16,400	47,465	3,211	937	1,428,214 L	16,200	49,988	3,203
	Diesel Fuel	61	96,764 L	23,200	3,707	265	64	96,503 L	22,300	3,696	256
Large Passenger Cars	Hybrid			20,800	77	5			25,000	211	13
	Gasoline	538	1,020,568 L	16,700	35,719	2,418	518	975,055 L	16,700	34,127	2,186
	Diesel Fuel			14,800	437	31			12,200	311	21
Light Trucks, Vans, SUVs	Hybrid			29,300	163	10			33,500	226	15
	Gasoline	1,546	4,251,822 L	18,900	148,814	10,146	1,674	4,552,750 L	18,800	159,347	10,311
	Diesel Fuel	126	335,484 L	15,100	12,848	914	85	241,725 L	16,800	9,257	640
	Other Fuel	17	38,680 L	13,300	978	59	13	22,192 L	9,800	561	34
Commercial Vehicles	Gasoline	203	650,540 L	19,000	22,768	1,529	238	751,551 L	18,800	26,304	1,682
	Diesel Fuel	374	1,675,787 L	24,800	64,183	4,510	453	2,164,207 L	26,900	82,889	5,650
	Other Fuel			12,700	433	26			11,400	169	11
Tractor Trailer Trucks	Diesel Fuel	165	3,644,933 L	51,700	139,601	9,808	153	3,565,251 L	54,700	136,548	9,309
	Other Fuel			13,500	103	5			10,200	81	4
Motorhomes	Gasoline	29	84,055 L	19,900	2,943	196	37	107,205 L	19,900	3,752	239
	Diesel Fuel	22	86,529 L	20,200	3,315	234	27	107,912 L	19,600	4,133	282
	Other Fuel			21,400	163	9					
Motorcycles, Mopeds	Gasoline	82	18,830 L	5,000	659	44	99	28,404 L	6,300	994	63
Buses	Gasoline			19,200	221	15	11	28,754 L	16,000	1,006	63
	Diesel Fuel			23,600	241	16			23,200	401	27
Totals		**4,039**	**13,260,119 L**	**19,611**	**484,838**	**33,451**	**4,309**	**13,260,119 L**	**19,814**	**514,074**	**34,013**

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Residential	Natural Gas	1,131	98,666 GJ	98,666	4,949	1,133	89,124 GJ	89,124	4,470
	Electricity	2,077	36,056,239 kWh	129,802	901	2,143	36,177,786 kWh	130,240	904
Commercial/Small-Medium Industrial	Natural Gas	129	131,318 GJ	131,318	6,587	131	124,165 GJ	124,165	6,228
	Electricity	247	28,067,511 kWh	101,043	702	267	26,738,891 kWh	96,260	668
Totals		**3,584**		**460,829**	**13,139**	**3,674**		**439,789**	**12,270**

Spallumcheen District Municipality

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Solid Waste		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Community Solid Waste	Solid Waste	0	3,481 t	N/A	3,125	0	3,639 t	N/A	4,005
Totals		**0**			**3,125**	**0**			**4,005**

Memo Items

Buildings		2007				2010			
		Connections	Consumption	Energy (GJ)	C02e (t)	Connections	Consumption	Energy (GJ)	C02e (t)
Large Industrial	Natural Gas	8	146,648 GJ	146,648	7,356	7	92,342 GJ	92,342	4,632
Totals		**8**		**146,648**	**7,356**	**7**		**92,342**	**4,632**

Totals for Transportation, Buildings and Solid Waste

Fuel Type	2007 (Population: 4,982)			2010 (Population: 5,153)		
	Consumption	Energy (GJ)	C02e (t)	Consumption	Energy (GJ)	C02e (t)
Hybrid	0 L	240	15	0 L	510	32
Gasoline	7,381,942 L	258,589	17,559	7,871,933 L	275,518	17,747
Diesel Fuel	5,839,497 L	224,332	15,778	6,175,598 L	237,235	16,185
Other Fuel	38,680 L	1,677	99	22,192 L	811	49
Natural Gas	229,984 GJ	229,984	11,536	213,289 GJ	213,289	10,698
Electricity	64,123,750 kWh	230,845	1,603	62,916,677 kWh	226,500	1,572
Solid Waste	3,481 t	0	3,125	3,639 t	0	4,005
Grand Totals		**945,667**	**49,715**		**953,863**	**50,288**

Spallumcheen 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	1,565	46	1,705	92	1,680	91
Semi-Detached House	10	0	0	0	5	0
Row House	40	1	0	0	0	0
Apartment, Duplex	15	0	5	0	20	1
Apartment, 5 storeys or higher	0	0	0	0	0	0
Apartment, under 5 storeys	0	0	10	1	0	0
Other Single Attached House	0	0	5	0	5	0
Movable Dwelling	210	6	120	7	145	8

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	1,765	84	1,710	85	1,720	90
Car, Truck,Van as Passenger	165	8	170	8	110	6
Public Transit	0	0	10	1	0	0
Walked	110	5	90	4	60	3
Bicycle	10	0	10	1	0	0
Motorcycle	0	0	10	1	0	0
Taxicab	10	0	0	0	0	0
Other Method	35	2	20	1	20	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	0	0
Local Parks	0	0
Agricultural Land Reserve	13,967	54
Other land use	11,710	46
Total Parks and Protected Area	0	0
Total Land Area	25,677	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	0	0
Local Parks	0	0
Agricultural Land Reserve	13,967	54
Other land use	11,710	46
Total Parks and Protected Area	0	0
Total Land Area	25,677	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,