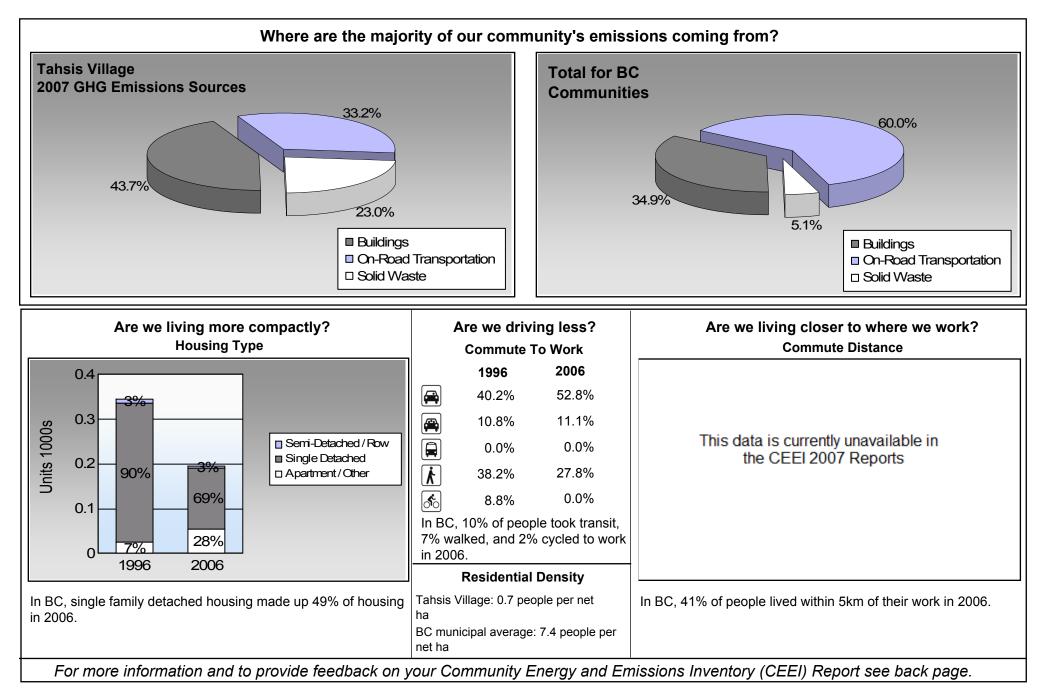


BC's Community Energy and Emission Inventories...supporting efforts towards Complete, Compact, Energy-Efficient Communities





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# **Sectors**

| On Road Transport         | ation       | <u>Vehicles</u> | Consumption            | <u>Measurement</u>  | Average-VKT(km)  | Energy (GJ) | <u>CO2e (t)</u> |
|---------------------------|-------------|-----------------|------------------------|---------------------|------------------|-------------|-----------------|
| Small Passenger Cars      | Gasoline    | 19              | 26,387                 | Litres              | 14,086           | 924         | 63              |
|                           |             |                 |                        | Small Pa            | assenger Cars    | 924         | 63              |
| Large Passenger Cars      | Gasoline    | < 10            | 23,230                 | Litres              | 17,072           | 813         | 55              |
|                           | Diesel Fuel | < 10            | 7,158                  | Litres              | 19,994           | 274         | 20              |
|                           |             |                 |                        | Large Pa            | assenger Cars    | 1,087       | 75              |
| Light Trucks, Vans, SUVs  | Gasoline    | 82              | 256,547                | Litres              | 19,947           | 8,979       | 612             |
|                           | Diesel Fuel | < 10            | 19,145                 | Litres              | 16,053           | 733         | 52              |
|                           | Other Fuel  | < 10            | 4,277                  | Litres              | 12,838           | 164         | 7               |
|                           |             |                 |                        | Light Tr            | ucks, Vans, SUVs | 9,876       | 671             |
| Commercial Vehicles       | Gasoline    | < 10            | 20,776                 | Litres              | 20,530           | 727         | 49              |
|                           | Diesel Fuel | < 10            | 22,482                 | Litres              | 23,464           | 861         | 60              |
|                           | Other Fuel  | < 10            | 2,873                  | Litres              | 11,356           | 110         | 4               |
|                           |             |                 |                        | Commercial Vehicles |                  | 1,698       | 113             |
| Tractor Trailer Trucks    | Gasoline    | < 10            | 1,190                  | Litres              |                  | 42          | 3               |
|                           | Diesel Fuel | < 10            | 15,592                 | Litres              | 23,619           | 597         | 42              |
|                           |             |                 | Tractor Trailer Trucks |                     |                  | 639         | 45              |
| Motorhomes                | Gasoline    | < 10            | 138                    | Litres              |                  | 5           | -               |
|                           | Other Fuel  | < 10            | 554                    | Litres              | 2,189            | 21          | 1               |
|                           |             |                 |                        | Motorho             | omes             | 26          | 1               |
| Motorcycles, Mopeds       | Gasoline    | < 10            | 518                    | Litres              | 6,353            | 18          | 1               |
|                           |             |                 |                        | Motorcy             | cles, Mopeds     | 18          | 1               |
|                           |             |                 |                        | <b>0</b>            |                  | 11 500      | 700             |
|                           |             |                 |                        | Gasoline            | 2:               | 11,508      | 783             |
|                           |             |                 |                        | Diesel:             |                  | 2,465       | 174             |
|                           |             |                 |                        | Other Fu            | el:              | 295         | 12              |
| On Road Transportation To | otals       |                 |                        | All Fuels:          |                  | 14,268      | 969             |



| Buildings                               | Туре        | <b>Connections</b> | Consumption   | Measurement           | Energy (GJ)      | <u>CO2e (t)</u> |
|---|-------------|--------------------|---------------|-----------------------|------------------|-----------------|
| Residential                             | Electricity | 416                | 4,927,221     | Kilowatt Hours        | 17,738           | 122             |
|   | Heating Oil |                    | 13,312        | GigaJoules            | 13,312           | 938             |
|   | Propane     |                    | 2,293         | GigaJoules            | 2,293            | 140             |
|   | Wood        |                    | 16,251        | GigaJoules            | 16,251           | 6               |
|   |             |                    | Residential   |                       | 49,594           | 1,206           |
| Commercial/Small-Medium Industrial      | Electricity | 63                 | 2,785,006     | Kilowatt Hours        | 10,026           | 69              |
|   | ,           |                    | Commercial/Sm | all-Medium Industrial |                  | 69              |
|   |             |                    | Elect         | ricity:               | 27,764           | 191             |
|   |             |                    |               | al Gas:               | 21,101           |                 |
|   |             |                    | Propa         |                       | 2,293            | 140             |
|   |             |                    | Wood          |                       | 16,251           | 6               |
|   |             |                    | Heati         | ng Oil:               | 13,312           | 938             |
| Buildings Totals                        |             |                    | Build         | lings:                | 59,620           | 1,275           |
| Calid Wasta                             |             |                    |               |                       | Mass (t)         | CO2e (t)        |
| Solid Waste                             |             |                    | Comn          | nunity Solid Waste    | 246              | 672             |
|   |             |                    |               |                       | 240              | 072             |
| Grand Total                             |             |                    | CONSUMPTION   |                       | ENERGY (GJ)      | <u>CO2e (t)</u> |
| Dies                                    | sel Fuel    |                    | 64,377        | L                     | 2,465            | 174             |
| Elec                                    | ctricity    |                    | 7,712,227     | kWh                   | 27,764           | 191             |
|   | oline       |                    | 328,786       | —                     | 11,508           | 783             |
|   | ting Oil    |                    | 13,312        |                       | 13,312           | 938             |
|   | er Fuel     |                    | 7,704         | —                     | 295              | 12              |
| -                                       | pane        |                    | 2,293         |                       | 2,293            | 140             |
|   | d Waste     |                    | 246           | •                     | 0                | 672             |
| Woo                                     | Da          | _                  | 16,251        | GJ                    | 16,251           | 6               |
| Total of Transportation / Buildings / S |             |                    |               |                       | <b>73,888</b> GJ | 2,916 tonnes    |



# **Memo Items**

| Buildings        | Туре        | <b>Connections</b> | <u>Consumption</u> | Measurement    | Energy (GJ) | <u>CO2e (t)</u> |
|------------------|-------------|--------------------|--------------------|----------------|-------------|-----------------|
| Large Industrial | Electricity | 0                  | 0                  | Kilowatt Hours | -           | -               |
|                  |             |                    | Lar                | ge Industrial  | -           | -               |
|                  |             |                    |                    |                |             |                 |



# **Supporting Indicators**

Below you will find supporting indicators for which data is provided. These are the first five supporting indicators for which data is provided as a part of the updated 2007 CEEI. Columns with all zeros indicate data unavailable in these CEEI reports. Thirteen additional supporting indicators are under consideration for future reports (see next page). Local government feedback is requested on all supporting indicators. Please take the time to complete the short CEEI Survey 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> or contact us directly at <a href="http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html">CEEIRPT@gov.bc.ca/cas/mitigation/ceei/index.html</a> or

#### 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.

|                                | 199<br>Units | 6<br>% | 200<br>Units | 1<br>% | 2006<br>Units | °<br>% |  |
|--------------------------------|--------------|--------|--------------|--------|---------------|--------|--|
| Single Detached House          | 310          | 47     | 185          | 67     | 135           | 69     |  |
| Semi-Detached House            | 0            | 0      | 5            | 2      | 0             | 0      |  |
| Row House                      | 10           | 2      | 10           | 4      | 5             | 3      |  |
| Apartment, Duplex              | 0            | 0      | 0            | 0      | 5             | 3      |  |
| Apartment, 5 storeys or higher | 0            | 0      | 0            | 0      | 0             | 0      |  |
| Apartment, under 5 storeys     | 25           | 4      | 10           | 4      | 10            | 5      |  |
| Other Single Attached House    | 0            | 0      | 5            | 2      | 0             | 0      |  |
| Movable Dwelling               | 0            | 0      | 60           | 22     | 40            | 21     |  |

#### 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   |    | 20     | 2001 |        | 2006 |  |
|----------------------------|--------|----|--------|------|--------|------|--|
|                            | People | %  | People | %    | People | %    |  |
| Car, Truck, Van as Driver  | 205    | 40 | 115    | 56   | 95     | 53   |  |
| Car, Truck,Van as Passenge | 55     | 11 | 35     | 17   | 20     | 11   |  |
| Public Transit             | 0      | 0  | 0      | 0    | 0      | 0    |  |
| Walked                     | 195    | 38 | 40     | 20   | 50     | 28   |  |
| Bicycle                    | 45     | 9  | 0      | 0    | 0      | 0    |  |
| Motorcycle                 | 0      | 0  | 0      | 0    | 0      | 0    |  |
| Taxicab                    | 0      | 0  | 0      | 0    | 0      | 0    |  |
| Other Method               | 10     | 2  | 15     | 7    | 15     | 8    |  |

**Residential Density** 

\* Net of Crown land, parks, Indian Reserves, water features, airports, ALR,waste disposal sites.

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  |
|---|-------|
| Population                              | 381.0 |
| Net Land Area (ha) *                    | 534.1 |
| Residential Density (people per net ha) | 0.7   |

#### 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

People %

This data is currently unavailable in the CEEI 2007 Reports.



#### Parks and Protected Greenspace

\* Total is net of Indian Reserves \*\* The quantity of parkland may be underestimated Parks and protected greenspaces are important for the protection and enhancement of community carbon sinks.

|                                    | 2009      |       |  |  |  |
|------------------------------------|-----------|-------|--|--|--|
|                                    | Area (ha) | %     |  |  |  |
| National Parks                     | 0.0       | 0.0   |  |  |  |
| Provincial Parks / Protected Areas | 0.0       | 0.0   |  |  |  |
| Local Parks                        | 1.8       | 0.3   |  |  |  |
| Agricultural Land Reserve          | 0.0       | 0.0   |  |  |  |
| Other land use                     | 560.6     | 99.7  |  |  |  |
| Total Land Area                    | 562.4     | 100.0 |  |  |  |



# **Supporting Indicators Under Consideration**

The following supporting indicators are under consideration for inclusion in future CEEI reports. The 2007 CEEI reports provide these 'placeholder' indicators to give indication of data that may be provided in the future by the Province on an ongoing basis to assist in monitoring actions to reduce GHG emissions and energy consumption. Please submit feedback to <u>CEEIRPT@gov.bc.ca</u> (see survey on CEEI website).

#### **On-Road Transportation (and Land Use)** Proximity to Transit Persons, dwelling units (du) and employment within 400m of a guality transit stop/line Persons and dwelling units (du) within 400m of services (e.g. grocery store, school, other retail etc.) Proximity to Services Transit Ridership Annual per capita transit ridership **Buildings** Residential; Public Building Average energy use per person per square metre of floor space Energy Intensity Average residential dwelling unit size Floor Space Solid Waste (and Water) Waste Diversion Tonnes of waste diverted Avoided Waste Emissions Tonnes of CO2e of avoided future emissions due to reduced waste since 2007 Water Use Per capita residential water use Land-Use Change Impervious Surface Cover % change in impervious surface cover Tree Canopy Cover % change in tree canopy cover **Community and Renewable Energy Supply** 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)



# This is your local government's Updated 2007 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 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, and fulfill Milestone One requirements for those local government members of the Federation of Canadian Municipalities' (FCM's) Partners in Climate Protection (PCP) program.

#### A first in North America!

CEEI is a first in North America and a first step for BC communities. The 2007 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 and medium from large industrial buildings, including updated land-use change and new agricultural sectors as 'memo items', and the first of a suite of 'supporting indicators'. 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 Updated 2007 CEEI Reports, CEEI Data Summary Report, Technical Methods and Guidance Document, and additional information on the Secondary 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 <<u>http://www.toolkit.bc.ca></u> and <<u>http://www.cd.gov.bc.ca/lgd/greencommunities/targets.htm></u>.

## We Need Your Feedback:

- To continue to guide us on CEEI, particularly now with the new Indicators. Please take the time to complete the short CEEI Survey 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> or contact us directly at <a href="http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html">CEEIRPT@gov.bc.ca/cas/mitigation/ceei/index.html</a> or contact us directly 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> or contact us directly at <a href="http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html">http://www.env.gov.bc.ca</a>

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, where you do note inaccuracies, please contact us.