

2010 Community Energy and Emission Inventory Reports Webinar: Supplementary Materials

CEEI Reports

CEEI Website: <http://www.env.gov.bc.ca/cas/mitigation/ceei/index.html>

Primary Sectors

On-road Transportation – Light Duty Vehicles, Commercial Vehicles

Buildings - Residential, Commercial/Small-Medium Industrial

Solid Waste

Memo Items

Large Industrial Buildings

Agriculture – Enteric Fermentation

Land-Use Change – Deforestation and Settlement

Supporting Indicators (2007 Reports)

Residential Density

Parks and Protected Areas

Commute Mode

Commute Distance

Housing Type

Geo-Visualization Tool

Available through iMapBC and DataBC in Spring 2012

iMapBC: <http://webmaps.gov.bc.ca/imfx/imf.jsp?site=imapbc>

DataBC: <http://www.data.gov.bc.ca/>

Other Resources

BC Climate Action Toolkit: <http://toolkit.bc.ca/>

LiveSmart Climate Leaders Community: <http://www.livesmartbccommunity.ca/>

Fraser Basin Council Smart Planning for Communities:

http://www.fraserbasin.bc.ca/programs/smart_planning.html

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The CIMS Community Model

The CIMS Community model is designed to assist British Columbian communities with their energy and greenhouse gas emissions planning. This tool is both free and user-friendly. Therefore, it allows anyone to forecast the energy consumption and emissions of communities covered by the British Columbian Community Energy and Emissions Inventories (CEEI). These forecasts can be quickly produced under various future assumptions and scenarios. Therefore, local governments can use the model to estimate the effects of policies on energy consumption and emissions and to help assess both short and long term targets for these indicators.

This model was created by consultants from M.K. Jaccard and Associates and Navius Research in collaboration with the Energy and Materials Research Group at Simon Fraser University. It was developed with input from members of the Regional District of Nanaimo and the Sunshine Coast Regional District and funded by the Pacific Institute for Climate Solutions.

What can this tool do?

CIMS Community simulates the acquisition, use and retirement of the energy using technologies, from light bulbs to cars and truck, found in communities from the present to 2050. Consequently, it also simulates energy consumption and greenhouse gas emissions during this period. It covers residential and commercial/institutional/small industrial buildings, solid waste, personal transportation and freight transportation and can be set to represent specific communities. Therefore, CIMS Community can quickly:

- Produce reference scenario energy and emissions forecasts for communities based on the CEEI reports and user defined assumptions such as energy prices and population growth.
- Show the effect of alternative assumptions and inputs
- Provide realistic analysis of individual and multiple policies that affect energy and emission.
- Generate visual and numeric scenario results.

What does realistic policy analysis mean?

CIMS Community provides realistic policy analysis. Therefore, in forecasting results, the model considers both the technologies and human behaviour that result in energy consumption and emissions. This consideration includes the lifespan of existing technologies, the emergence of new technologies and the diversity of human decision making and behaviour when purchasing, using and retiring these technologies (i.e., we are not perfectly rational cost-minimizers and we all have different preferences).

How can the tool contribute to community energy and emissions planning?

CIMS community is not an energy and emissions planning process itself. Instead it provides relevant quantitative information to the planning process. CIMS Community can be used by local governments to:

- Produce a standalone forecast for a community that has not completed an energy and emissions plan.

- Update an existing energy and emissions analysis if there are changes in fundamental assumptions, senior government policy, mandates for emissions targets, or the community vision for emissions abatement.
- Test the sensitivity of an energy and emissions plan to a range of assumptions or to a different methodology.
- Produce assumptions, such as the effect of a specific policy or changes in reference case technologies, to inform other analyses.

Furthermore, CIMS Community can be used as a communication and education tool by:

- Facilitating the communication, visualization and real-time feedback of outcomes of alternative policy plans and assumptions.
- Providing a tool that can be used by anyone to better understand how current conditions, future assumptions, and market and policy drivers may affect the energy system.

Does it cost anything to use this model?

Because the Pacific Institute for Climate Solutions funded the development of the CIMS Community model, it may be used and shared freely. Both the CIMS Community Excel model and the accompanying documentation are licensed under the Creative Commons Attribution, Non-Commercial, and No Derivatives license. They can be shared and used so long as they are attributed to the developers and funders. The material cannot be used for commercial purposes or used to produce a derivative work without the permission of the developers.

What are the limitations of this model?

CIMS Community uses a rigorous methodology and provides sound analysis of how a community's energy system may evolve in response to market forces and policies. However, the results are based on modelling archetypical technologies, equipment and infrastructure. All forecasts are inherently uncertain and this model may misrepresent a specific action that would change a local energy system. As such, local knowledge and other analyses are valuable companions to a CIMS Community analysis. Furthermore, the CIMS community does not prescribe a planning process and must be used on the initiative of local governments

What is the status of the CIMS Community Model?

As of January 2012, a single sector demonstration model, with documentation, is available. The full model is nearing completion and will soon be made publicly available. Please send questions and comments on this project to:

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