CEEI 2007-2012 Q&A

General

Q: What are the significant changes for the 2012 report?

- *Due to an aging (2007) and limited sample size of real odometer readings in regional districts outside of Metro Vancouver and the Fraser Valley, transportation data will be withheld outside the lower mainland in the release of the 2012 reports. Annual data from the lower mainland (AirCare program) has a higher sample size (statistically sound) of real odometer readings which provides the assurance necessary for release. A priority moving forward will be to determine reliable transportation emissions beyond the Lower Mainland for all of B.C.*
- *2007-2010 reports had commute distance as a supporting indicator, but this data is no longer available through the Census or the National Household Survey. As such it has been removed as of 2012.*
- *2007-2010 reports had large industrial facilities as a memo item at both the municipal and regional district level. As of 2012, large industrial facilities will be reported out as memo items at the regional district level only, in line with the B.C. Reporting Regulation. This will substantially increase the accuracy of the data as it's subject to third party verification under the Regulation.*
- *Emissions from land-use change caused by deforestation were previously a memo item that was only reported out in 2007 at the regional district level. As of 2012 onwards, it will be a primary sector item with information available only at the municipal level.*
- *Data for supporting indicators will now be published at an increased resolution of the census tract level where available. Census tracts are small, relatively stable geographic areas that typically have populations between 2,500 and 8,000.*
- *3 new supporting indicators have been added to the 2012 reports; Proximity to transit, proximity to services and floor space. See Supporting Indicators section below for more information.*

Q: Why has the release of the finalized 2012 reports been delayed?

Collecting and analysing such a vast amount of data takes a considerable amount of time. The draft reports have taken a long time to become final as we have made an extensive effort to check all the data for errors before release. As well, new transportation methodologies took much longer to implement than first anticipated.

Q: Why have the 2007 and 2010 reports been released again and why have they changed?

CEEI is in a state of "continuous improvement". This means that new data and methodologies are used when they become available. A number of new methodologies were used in 2012. These then have to be applied back to the 2007 and 2010 reports for consistency and comparability. In future years, all previous years as well as the 2007 baseline report will always be updated to reflect the latest data and methodologies being employed.

Q: Why do the emissions factors for some energy sources change from 2010 to 2012?

There are a number of reasons why emissions factors may change from year to year. For electricity, the generation mix causes variations in the overall emissions factor. For example, if a higher percentage of electricity is generated from diesel compared to hydro, the emissions factor for the utility will rise. If a community receives power from multiple sources (e.g. BC Hydro and Fortis BC), the emissions factor will change depending on how much is received from each utility.

Fuels can also see changes in emissions factor if the fuel content changes. For example, between 2007 and 2010 legislation was passed requiring a percentage of renewable fuel (ethanol or bio-diesel) be included in gasoline, diesel, and heating oil. This caused the emissions factors for those fuels to go down.

Q: Why is some data withheld?

Privacy legislation requires that private data not be made public without consent. For CEEI, if there are very few customers of a certain type within a community, publishing the data would allow that customer's energy consumption to be estimated. Therefore the data is withheld if there are fewer than three utility customers or fewer than ten vehicles within the jurisdiction. These limits are set by the data providers.

For wood, oil, and delivered propane, data is sometimes withheld if the amounts are small (<5% of total GHGs). This is because of the inherent inaccuracy of the wood/oil/propane calculations, which get less precise as the quantity gets smaller.

For transportation, data is withheld in jurisdictions where the sample size of vehicles available to derive vehicle kilometres travelled is not statically sound or current.

Buildings

Q: Why do oil, wood, and delivered propane all increase or decrease by the same amount?

There is no new data available for wood, oil, and delivered propane for 2010 or 2012. Therefore the 2007 data was simply adjusted for temperature to estimate 2010 and 2012 data. It should be kept in mind that 2007, 2010 and 2012 wood, oil, and delivered propane data are only rough estimates.

The use of these fuels is estimated by calculating the total energy required for heating and other uses, then subtracting the electricity and gas consumption from this total. The remainder is then attributed to heating oil, propane or wood, using a ratio for each based on other available data.

Q: Are apartment buildings/condominiums considered residential or commercial? What about mixed use buildings with residences and commercial space?

Buildings are usually categorized according to the rate structure they fall under. For electricity this is generally an accurate reflection of their actual usage. For mixed use buildings the residential and commercial areas usually have separate electricity meters, and are therefore categorized correctly.

For natural gas and propane, larger apartments and condominiums often fall under a commercial rate structure. Therefore these will usually be categorized as commercial buildings.

Transportation

Q: The number of vehicles in our community seems high/low.

The number of vehicles in a community is based on ICBC records, which assign location based on the postal code. Postal codes do not align with municipal boundaries and it is necessary to adjust the results accordingly using geographical population data. This approach, while an improvement on previous methods, is still approximate and can result in errors, particularly for small and/or rural areas. However, the results are consistent between reporting years. Efforts to improve the allocation of vehicles are ongoing.

Q: Why are there no transportation emissions in the 2012 CEEI reports for communities outside of the Lower Mainland?

Previously the CEEI reports incorporated estimates in jurisdictions outside of the Lower Mainland based on actual odometer readings from ICBC APV 9T Transfer Tax forms (which are completed when a vehicle changes ownership). The average for each vehicle class for each regional district was then calculated, as well as the percentage difference between the actual average and the average based on the Fraser Valley coefficients for vehicle class and region. As these estimates were based on a limited sample sizes back in 2007, the decision was made to withhold the data due to concerns on completeness and accuracy. The Province continues to explore other options to improve VKT data.

Solid Waste:

Q: Why have our emissions gone up even though our disposed waste has gone down?

Waste emissions are not directly related to the waste being deposited in the landfill each year, rather once the waste has had a chance to decompose. Meaning the emissions do not occur for a few years. Therefore emissions for 2007, 2010 or 2012 are dependent on waste that was deposited in the landfill in previous years. While the "waste-in-place" methodology is consistent with GHG reporting standards, the mass tonnage of waste deposited may provide a better progress indicator for local governments.

Q: Why are our waste emissions so high compared to other municipalities with similar disposal amounts?

Waste emissions are dependent on a number of variables including: the compositions of the waste, the amount of precipitation at a landfill, the amount of landfill gas capture at a landfill, etc. These variables impact how the waste decomposes to create methane and what percentage of that methane is released into the atmosphere. As no two landfills have the exact same characteristics, the resultant emissions from them can differ greatly, impacting the attribution of emissions back to municipalities.

Q: How can our waste disposal and emissions have changed so much from 2007 to 2012?

Waste disposal streams are constantly in a state of flux making it difficult to attribute emissions back to the municipalities who contribute the waste. A primary reason for major changes in solid waste

emissions from 2007 to 2012 was the re-alignment of waste streams to different landfills. In some instances, waste disposal figures may have also change due to per-capita estimates in 2007 being updated with actual on-site data in 2012.

Land-use Change from Deforestation

Q: How was data for Land-use Change from Deforestation calculated?

Information for the 2007 - 2012 CEEI was derived from 2008 and 2012 satellite imagery and aerial photographs. Previous information reported in the 2007 – 2010 CEEIs was derived from 2000 and 2008 satellite imagery and aerial photographs. Due to the temporal time scales in which air photos were taken, the accuracy level of this data is deemed to be moderate.

Q: What new categories are available in the Land-use change from deforestation category?

The 2007-2012 CEEI reports included 2007 estimates of hectares of deforestation for each regional district broken down into agriculture and urban development categories along with resulting CO_2e emissions. The reports include deforestation estimates for municipalities and electoral areas further broken down into nine categories (deforestation as a result of hydro, industry, mining, urban development, oil and gas, recreation, transportation, agriculture and forestry).

Memo Items

Q: What emissions are now considered for Industrial Buildings? Why are these listed as a Memo Item?

While large emitters were previously broken down by natural gas and electricity energy consumption and emissions in a single large industrial category, they will now be further disaggregated by industrial categories and categorical emissions as reported under the BC Reporting Regulation. Industrial buildings continue to be listed as a memo item for a number of reasons, including the high variability of industrial emissions, and the limitations of local government control.

Q: Why is only enteric fermentation considered for Agriculture? What about manure management and agricultural soils?

Although manure management and agricultural soils are included in inventories at a national/provincial level, there is insufficient data available on local farm practises to calculate these values on a local government basis.

Emissions from manure vary considerably with the method of storage, length of storage and moisture content. This variation can greatly affect methane emissions from manure. Therefore, since there is currently no systematic observation of farm practices in B.C, the calculation of manure management at the local and regional level is not able to reflect a sufficient level of reliability within CEEI reporting

Q: Why is there agriculture under Land-use Change as well as under Agriculture?

Agriculture emissions referenced under Land-use Change refer to land that is deforested during the reporting period for the purpose of agriculture. Emissions under the Agriculture memo item refer to agricultural activities taking place on land that is already being used for agriculture.

Supporting Indicators:

Q: There are 3 new supporting indicators for 2012: Proximity to Transit, Proximity to Services and Floor Space. Can you explain each?

Proximity to Transit
Proximity to Transit data comes from two different sources: Translink data is used for Metro Vancouver's member municipalities. BC Transit data is used for all communities outside of Metro Vancouver for which data is available. This data represents persons, dwelling units and employment within walking distance of a "quality" transit stop/line

Proximity to Services: Walk Score® www.walkscore.com
The Walk Score rankings are drawn from this site http://www.walkscore.com/CA-BC/. The scores measure the walkability of neighbourhoods based on population density, proximity to amenities, pedestrian friendliness, etc.

Floor Space
In order to improve understanding of the building characteristics at a neighbourhood level, the BC Assessment Building Information Reports have been analysed and summarized to provide total floor area values for each building category at the Census Tract level (where available) and for all Municipalities that receive a CEEI Report as well as the remaining unincorporated areas of the province.

For more information please see the *Technical Methods and Guidance Document 2007-2012 Reports* document.

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