

Improving Empirical Approaches to Estimating Local Greenhouse Gas Emissions

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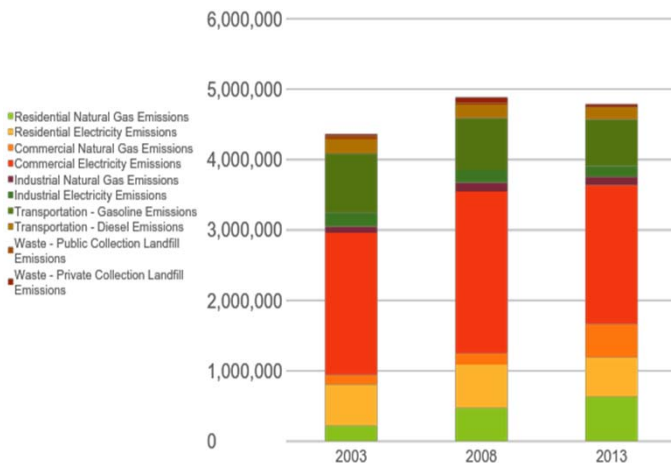
Background Information

In 2005 the City of Pittsburgh completed its first Green House Gas Inventory with 2003 data. A second inventory was completed in 2010 with 2008 data. When the process began again in 2015 with 2013 data, many issues were recognized. Due to errors in the previous data, and lack of data collection methodology, comparisons can not be made between the inventories. Legitimate conclusions can not be drawn from the existing inventories.

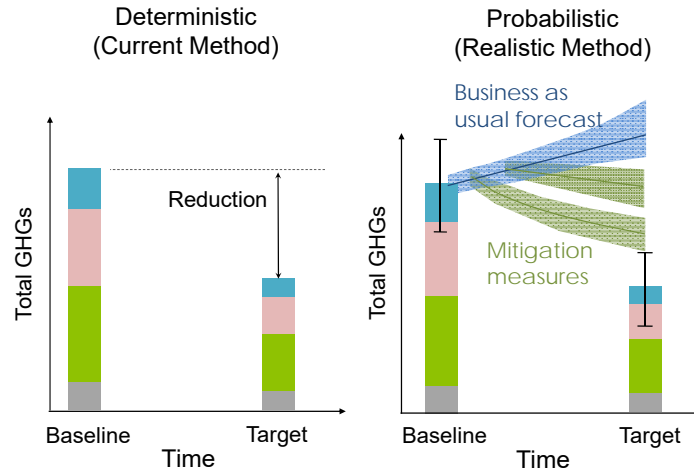
Project Overview

The City of Pittsburgh, mentored by the AGU and in partnership with University of Pittsburgh (Prof. Blackhurst) and Carnegie Mellon University (Prof. Azevedo), undertook an effort to characterize greenhouse gas emissions with particular emphasis on uncertainty and data collection consistency.

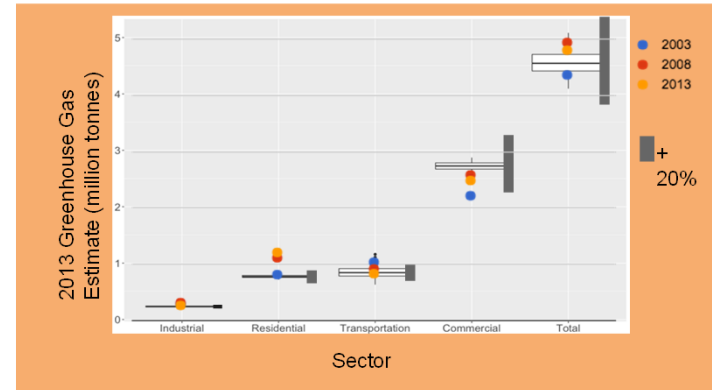
Weather Normalized Emissions



Deterministic vs. Probabilistic



Does Uncertainty Matter



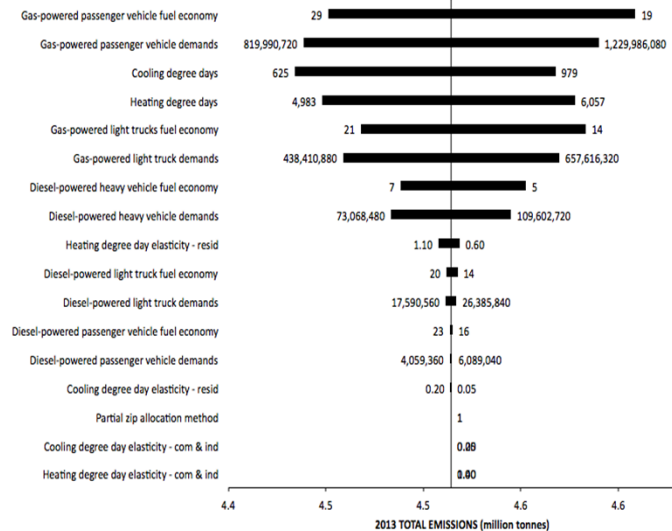
Implications

The combination of uncertainty in both the emission factors and the consumption data can overshadow any apparent trends in deterministic calculations. Probabilistic calculations allow for better understanding of available data and how to improve quality moving forward.

Recommendations

It is our recommendation that Cities revise how GHG goals are framed. Concrete measurements should be used to track progress towards goals. As further GHG Inventories are completed, steps should be taken to decrease uncertainties in data collection and communicate unavoidable uncertainties.

What's Driving Uncertainty



Find more at

<http://thrivingearthexchange.org/project/pittsburgh-pa/>