Municipal and Community Greenhouse Gas Inventory

Griffin Brown - UNHSI Sustainability Fellow

Mentors: Peter Britz and Jacob Levenson, City of Portsmouth

Changing the Baseline

2006 Report
- Did not include values for N2O and CH4.
- CO2 Equivalency values are out of date.

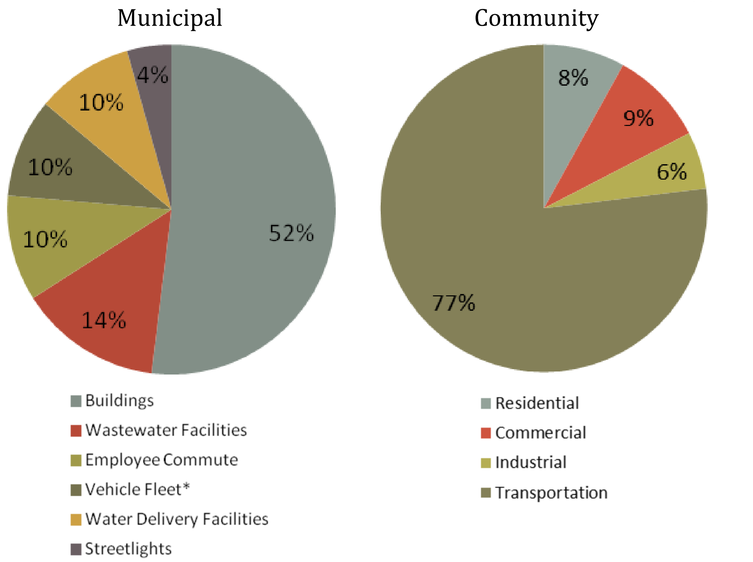
2012 Report
- More in depth than previous inventory.
- Had to make comparisons with 2006 energy usage alone.
- Aim to completely replicate data for 2018 calendar year.
- More up-to-date.

2018 Report
- Plan to update 2012 report.
- Will be compared directly with 2012 measured values. [1]

Chemical formula	GWP values for 100-year time horizon		
	Second Assessment Report (SAR)	Fourth Assessment Report (AR4)	Fifth Assessment Report (AR5)
CO_2	1	1	1
CH_4	21	25	28
N_2O	310	298	265

Previous Breakdown

2012 [2]

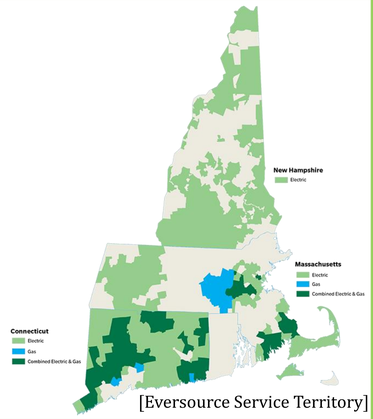


Category	Tonnes CO_2e
Buildings	8,008
Water Delivery Facilities	2,447
Employee Commute	1,606
Vehicle Fleet*	1,502
Wastewater Facilities	1,185
Streetlights	671
Total	15,419
Residential	126,447
Commercial	147,168
Industrial	88,835
Transportation	1,209,093
Waste	404
Total	1,571,947

Difficulties

Accuracy
- Refrigerants
- Vehicle Data
- RECs

Responses
- Unitil
- Eversource
- Propane and Fuel Oil Data
- Extensiveness of data sets



[Eversource Service Territory]

It is difficult to mitigate what is not being monitored.

City of PORTSMOUTH New Hampshire

UNH Sustainability Institute

References

1. Greenhouse Gas Protocol: Global Warming Potential Values
2. 2012 Greenhouse Gas Inventory: Portsmouth, NH