Metropolitan Washington Council of Governments

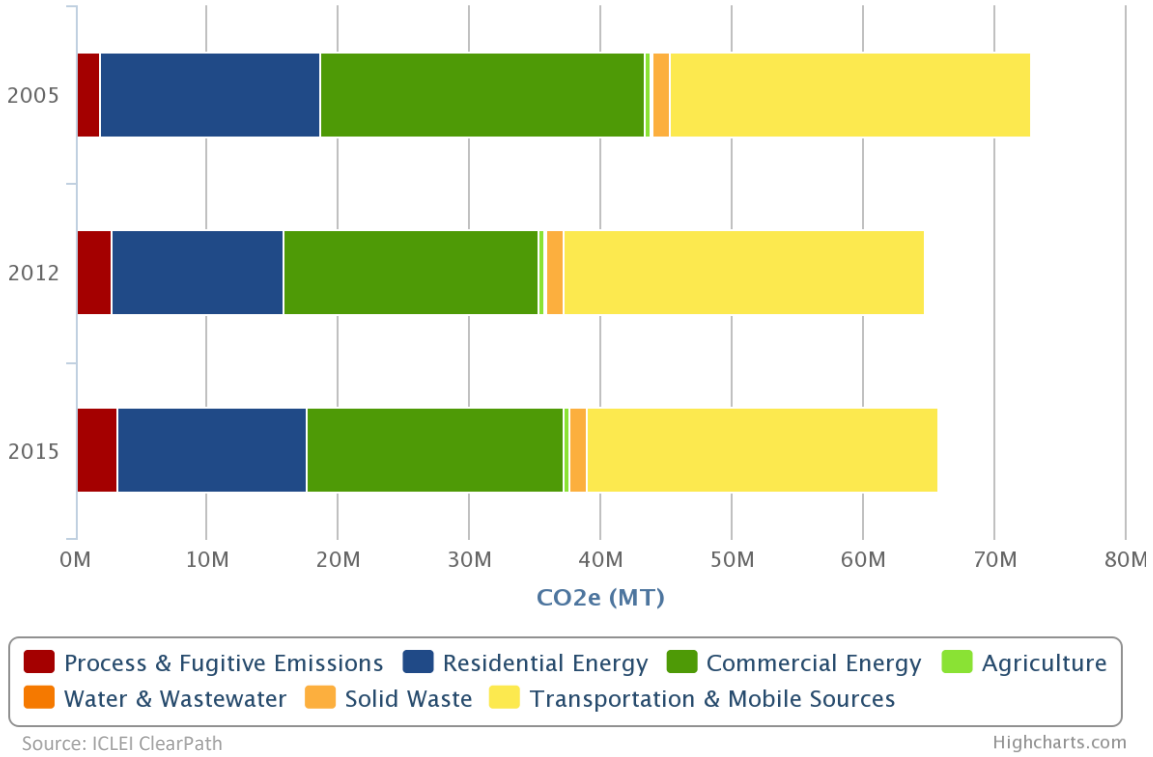
Metropolitan Washington

Community-Wide Greenhouse Gas Inventory Summary Factsheet

Emissions Summary

Metropolitan Washington community-wide greenhouse gas (GHG) emissions decreased by 10% between 2005 and 2015.

- Despite a 16% growth in population, GHG emissions reduced from 72.7 $MMTCO_2e$ (million metric tons of carbon dioxide equivalent) in 2005 to 65.6 $MMTCO_2e$ in 2015.
- Per capita emissions decreased 22% between 2005 and 2015; from 15.8 $MTCO_2e$ (metric tons of carbon dioxide equivalent) in 2005 to 12.3 $MTCO_2e$ in 2015.
- In 2015, energy consumption (residential and commercial) accounted for 52% of GHG emissions and transportation and mobile sources accounted for 41%. Efficiency and switching to cleaner fuel sources contribute to GHG reductions.



Inventory Background

In 2008, the Metropolitan Washington Council of Governments (COG) and local governments across metropolitan Washington collaboratively established the regional GHG emission reduction goals of: 10% below business as usual projections by 2012 (back down to 2005 levels); 20% below 2005 levels by 2020; and 80% below 2005 levels by 2050. COG and its member jurisdictions are working toward these goals. Metropolitan Washington met the 2012 goal, demonstrating that GHG reductions are possible even as the population and economy grows.

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Emissions Activities

The inventories measured GHG-emitting activities undertaken by residents, businesses, industry, and government located in Metropolitan Washington, as well as emissions from visitors. Emissions sources accounted for include:

- Electricity consumption from all sectors within the county;
- Combustion of natural gas and other fuels;
- Mobile transportation, including on-road vehicular travel, air travel, and commuter rail travel undertaken by residents, business, and visitors in the county, and off -road activities such as use of construction and landscaping equipment;
- Collection and treatment of solid waste produced by residents and activities within county boundaries;
- Pumping and treatment of water and wastewater used or produced by residents and activities; and
- Agricultural emissions from enteric fermentation, manure management, and soils (including fertilizer application);
- Fugitive emissions from ozone depleting chemicals and natural gas.
- All emissions are reported in million metric tons of carbon dioxide equivalent ($MMTCO_2e$) or metric tons of carbon dioxide equivalent (MTCO2e).

Methodology

- The methodology for the Metropolitan Washington GHG inventories uses the ICLEI US Community Protocol and ClearPath tool to measure emissions.
- Utility data was collected from regional electric and natural gas utilities. Emissions factors for electricity were based on EPA's Emissions & Generation Resource Integrated Database (eGRID) versions for 2005, 2012 and 2014.
- On-road and off-road transportation emissions were calculated using the EPA's Motor Vehicle Emission Simulator (MOVES v2010a and 2014) and based on VMT data provided by COG's Transportation Planning Board. Air travel emissions were calculated using national emissions from the EPA GHG Inventory scaled locally using population and air travel data from the Washington-Baltimore Regional Air Passenger Survey. Commuter rail emissions were calculated using MARC and VRE diesel consumption data scaled to the region.
- Emissions from landfills were calculated based on local and regional solid waste data. Wastewater treatment emissions were determined by data collected from local water utilities.
- Agricultural emissions were calculated using EPA's State GHG Inventory Tool and data from EPA's Chesapeake Assessment Scenario Tool and USDA's Census of Agriculture.
- Ozone depleting chemicals were calculated using national emissions scaled locally by population.

Links

- Metropolitan Washington Climate Energy and Environment Policy Committee: https://www.mwcog.org/committees/climate-energy-and-environment-policy-committee/
- Metropolitan Washington Council of Governments Climate and Energy Programs: https://www.mwcog.org/environment/planning-areas/climate-and-energy/