- U.S. Greenhouse Gas Inventory
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U.S. Greenhouse Gas Inventory

Related Links

DOE: Energy Information Administration

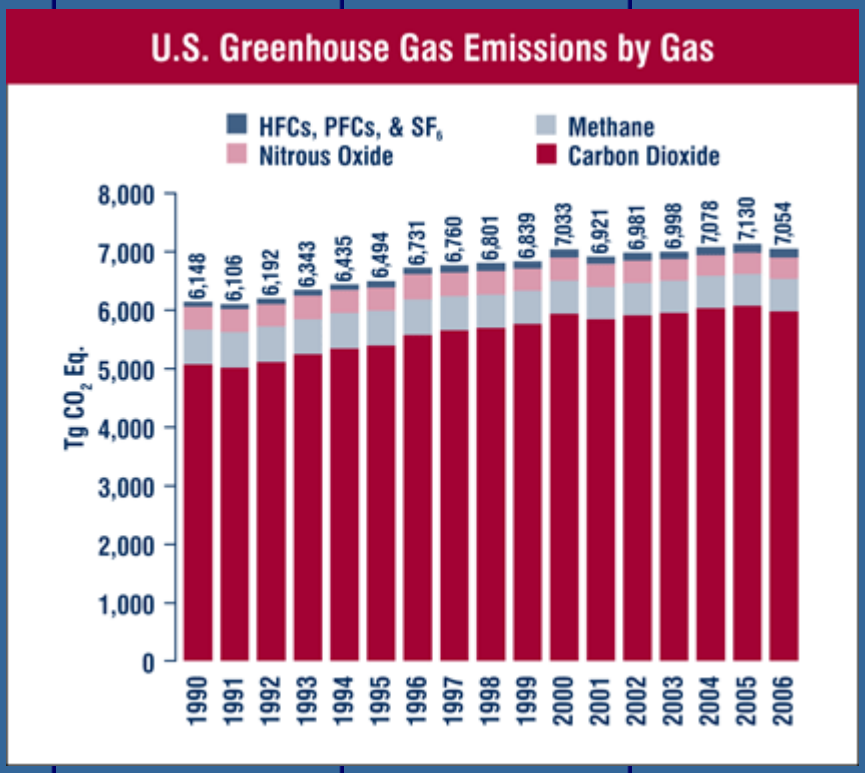
EPA

- EPA Greenhouse Gas Inventory Listserv
- Clean Air Markets Data and Maps
- Emissions & Generation Resource Integrated Database (EGRID)

EPA develops the national greenhouse gas inventory each year to track the national trend in emissions and removals since 1990. The national greenhouse gas inventory is submitted to the United Nations in accordance with the Framework Convention on Climate Change EXIT Disclaimer. In preparing the annual emissions inventory report, EPA collaborates with hundreds of experts representing more than a dozen U.S. government agencies, academic institutions, industry associations, consultants and environmental organizations.

Please see the 2010 Inventory of U.S. Greenhouse Gas Emissions and Sinks for a detailed analysis of all U.S. emissions and removals. You may also download the Executive Summary (PDF) (26 pp, 249K, About PDF), which includes an overview of recent trends, anthropogenic sources and sinks of

greenhouse gases and an explanation of the relative importance of emissions and removals from each source category.



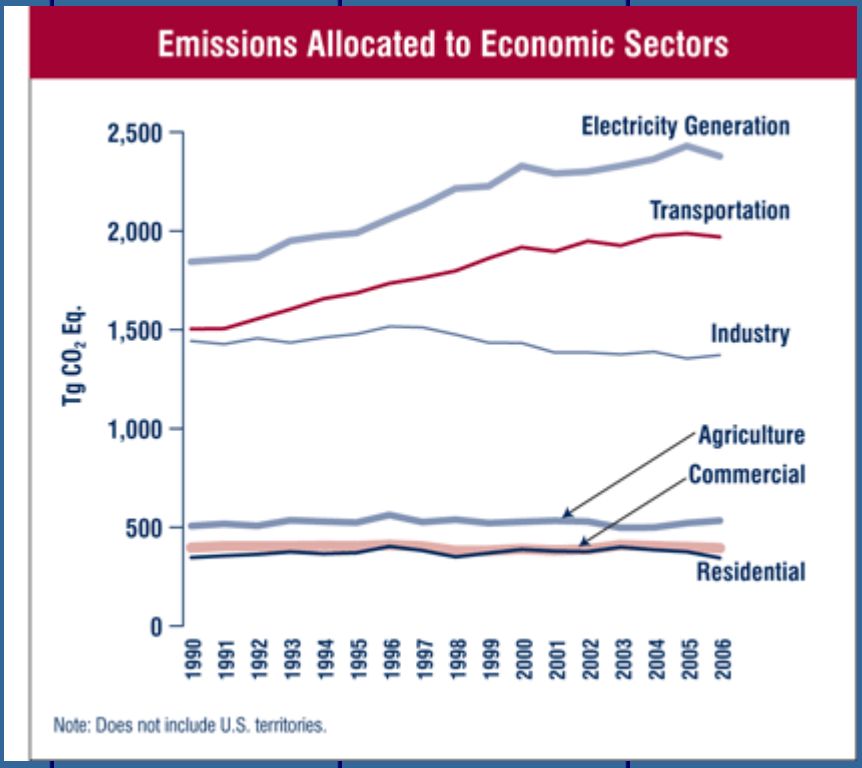
Reference: Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2006, USEPA #430-R-08-005

The figure above illustrates the relative contribution of the direct greenhouse gases to total U.S. emissions for the period 1990-2006. The primary greenhouse gas emitted by human activities in the United States was carbon dioxide (CO_2), representing approximately 85 percent of total greenhouse gas emissions. The largest source of CO_2 was from the combustion of fossil fuels. Methane emissions, which have steadily declined since 1990, resulted primarily from decomposition of wastes in landfills, natural gas systems and activities associated with domestic livestock. Agricultural soil management and mobile source fossil fuel combustion were the major sources of nitrous oxide emissions. The emissions of hydrofluorocarbons, which are substitutes for ozone depleting substances, were the primary component of fluorinated gas emissions.

To compare and combine emissions of different greenhouse gases into a national total, EPA uses global warming potentials (GWPs). GWPs compare

the radiative forcing or ability to trap heat of one metric ton of a greenhouse gas to a metric ton of CO_2.

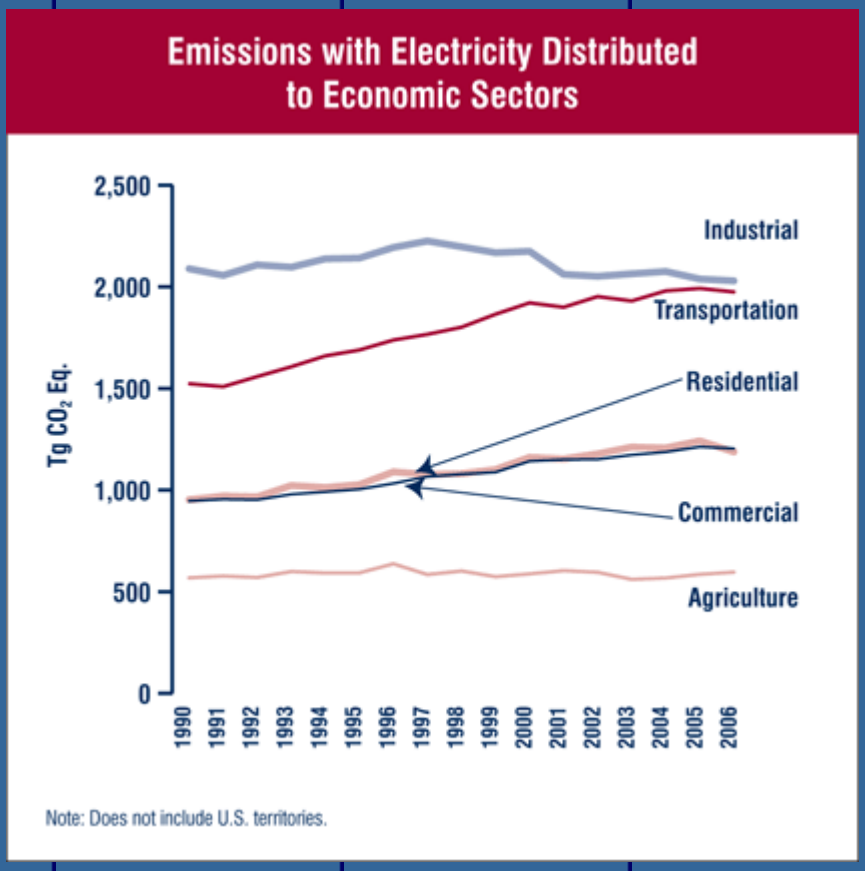
The U.S. greenhouse gas inventory also presents emissions by more commonly used economic categories: agriculture, commercial, electricity generation, industry, residential and transportation. Using this categorization, emissions from electricity generation accounted for the largest portion of U.S. greenhouse gas emissions in 2006. Transportation activities accounted for the second largest portion and emissions from industry comprised the third largest portion. The agriculture, commercial and residential economic sectors, listed in descending order of their contribution, together account for the remaining U.S. greenhouse gas emissions.



Reference: Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2006, USEPA #430-R-08-005

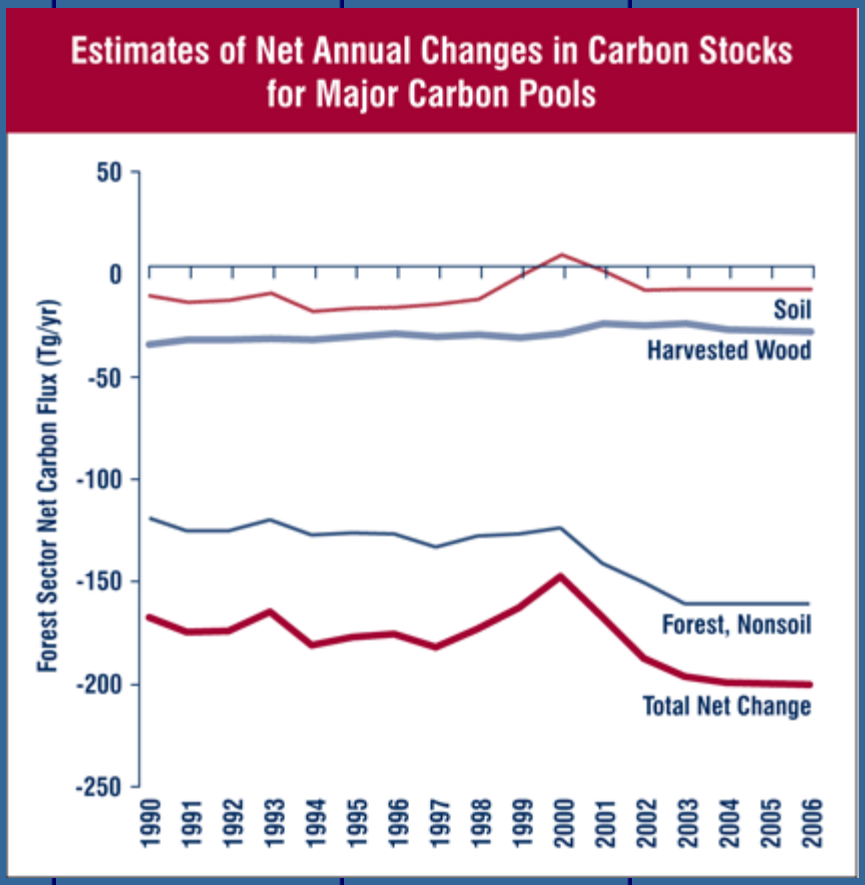
Electricity, though produced at power plants, is ultimately consumed in the other economic sectors. When emissions from electricity are distributed among these sectors, the industrial sector accounts for the largest share of U.S. greenhouse gas emissions. Transportation remains the second largest contributor to emissions. Emissions from the residential and commercial sectors increase substantially due to their relatively large share of electricity

consumption (e.g., lighting, appliances, etc.), with agriculture consuming little electricity.



Reference: Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2006, USEPA #430-R-08-005

Carbon dioxide can be removed from the atmosphere through activities such as planting trees, improving existing forests and soil management. As shown below, total carbon sequestration in the U.S. in 2006 removed approximately 13 percent of total U.S. emissions.



Reference: Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2006, USEPA #430-R-08-005

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What You Can Do | Frequent Questions | Climate Change for Kids | Where You Live | Newsroom | Related Links

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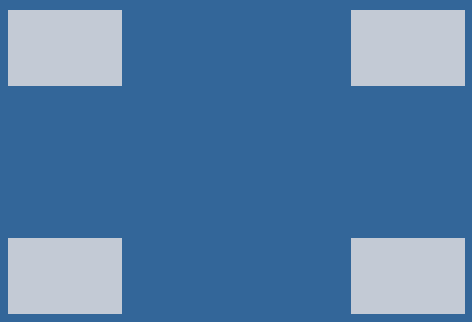

Carbon Dioxide
Methane

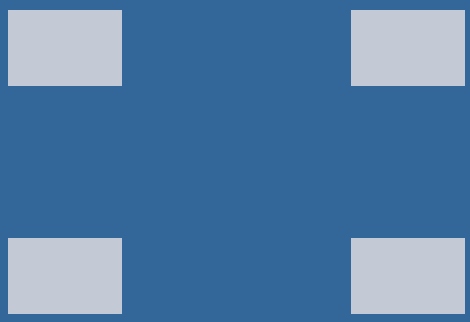


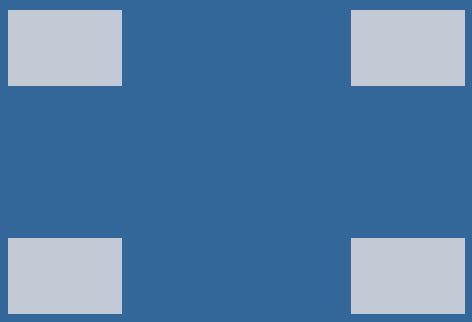

Nitrous Oxide




Fluorinated Gases

- Greenhouse Gas Inventories


U.S. Inventory
Other Countries


Global Emissions
State and Local




Corporate Inventories




Individual Emissions

- **Projections**
- **Project Methodologies**