



Regulating Greenhouse Gasses Under the Clean Air Act

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About NACAA

- ❑ National association of air pollution control agencies, located in Washington, D.C.
- ❑ Membership includes air agencies in 40 states, including the District of Columbia, four territories and 116 metropolitan areas
- ❑ Air Pollution control agencies are given “primary responsibility” under the Clean Air Act for implementation

Greenhouse Gasses (GHGs)

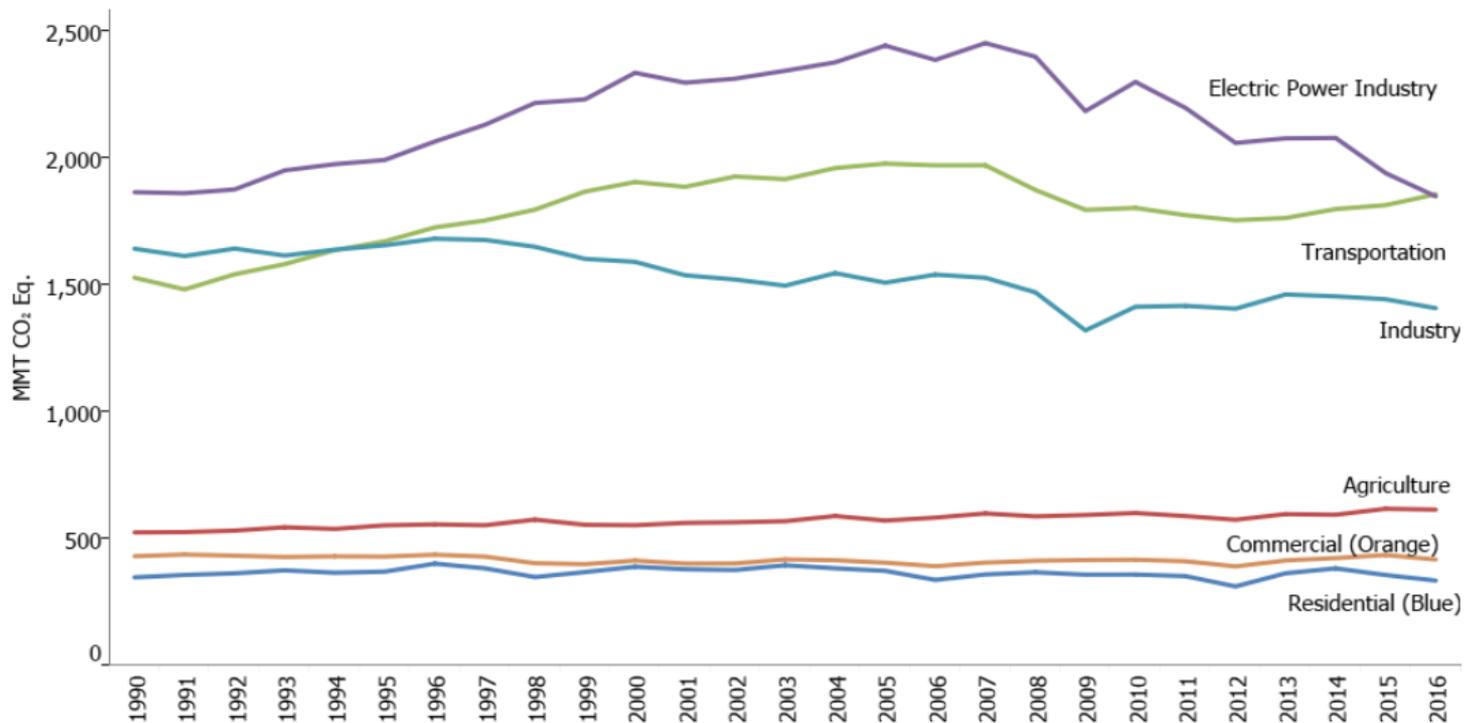
- ❑ GHGs are gasses that absorb infrared radiation and can trap heat in the atmosphere
- ❑ Global warming potential (GWP) denotes the ability of a GHG to trap heat in the atmosphere relative to CO₂

| Gas | GWP |
|-----------------------------------|---------------|
| Carbon Dioxide (CO ₂) | 1 |
| Methane (CH ₄) | 25 |
| Nitrous oxide (N ₂ O) | 298 |
| Hydrofluorocarbons (HFCs) | 124 to 14,800 |

2016 U.S. GHG Emissions

- ❑ Total U.S. GHG emissions were 6,511.3 million metric tons (MMT) CO₂ equivalent in 2016
- ❑ That represents a 2.4 percent increase from 1990 but an 11.1 percent decrease from 2005

U.S. GHG Emissions by Economic Sector



Source: Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2016, U.S. EPA (2018), Figure ES-14

Massachusetts v. EPA (2007)

- ❑ A group of states and NGOs filed a citizen suit against EPA for failing to act on a petition asking the agency to regulate GHG emissions from automobiles under section 202(a)(1) of the CAA
- ❑ EPA argued that the CAA does not authorize mandatory regulations to address global climate change; and even if it did, the connection between global average temperature increases and GHGs is too uncertain to justify regulations
- ❑ The Supreme Court found that:
 - ◆ GHGs meet the CAA's definition of "air pollutant"
 - ◆ EPA's decision (action or inaction) must be based on a reasoned judgment regarding whether GHGs "cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare."

President Obama's Inauguration (January 20, 2009)



Endangerment Finding (2009)

- ❑ Six anthropogenic GHGs endanger public health and welfare by causing climate change
 - ◆ Carbon dioxide (CO₂)
 - ◆ Methane (CH₄)
 - ◆ Nitrous oxide (N₂O)
 - ◆ Hydrofluorocarbons (HFCs)
 - ◆ Perfluorocarbons (PFCs)
 - ◆ Sulfur hexafluoride (SF₆)
- ❑ Combined emissions of these substances from motor vehicles contribute to harmful human health and welfare effects, including higher temperatures, more extreme weather events, and sea level rise

GHG Limits for Mobile Sources

❑ Passenger Vehicle Emission Limits (2010 and 2012)

- ◆ Phase I for MYs 2012 – 2016: fuel efficiency improvements from 30.1 MPG to 35.5 MPG by MY2016
- ◆ Phase II for MYs 2017 - 2025: fuel efficiency improvements to 54.5 MPG by MY2025
 - ✓ Requires a “Midterm Evaluation” for MYs 2022 -2025

❑ Commercial Trucks and Busses (2011)

- ◆ Phase I for MYs 2014 – 2018: decrease GHG emissions 10 to 20% by MY 2018 depending on vehicle type

CAA Cross-Triggering

- **Other CAA programs apply to “any air pollutant”**
 - ◆ The **PSD program** applies to stationary sources in attainment areas with the potential to emit 250 tons per year (TPY) of “any air pollutant”
 - ◆ The **Title V program** applies to stationary source with the potential to emit 100 TPY of “any air pollutant”
- **Timing Rule (2010)**
 - ◆ GHGs became air pollutants “subject to regulation” on January 2, 2011 when the Phase I standards went into effect
- **Tailoring Rule (2010)**
 - ◆ To avoid applying existing EPA programs to millions of new stationary sources, EPA proposed a 75,000 TPY CO₂e threshold for sources that would be subject to regulation solely based on their CO₂ emissions as well as a phased lowering of the threshold

Utility Air Regulatory Group v. EPA (2014)

- ❑ EPA cannot “tailor” statutory emission thresholds
- ❑ EPA cannot require stationary sources to obtain Prevention of Significant Deterioration (PSD) and Title V permits based solely on their potential greenhouse gas (GHG) emissions
- ❑ Sources already subject to stationary source permitting requirements due to their emissions of conventional pollutants can be required to install best available control technology (BACT) for GHGs, if the source emits more than a de minimis amount of GHGs

AEP v. Connecticut (2011)

- ❑ A group including several states filed federal common law nuisance claims against five large power companies to cap their CO₂ emissions
- ❑ The Court found that the CAA displaces any federal common law right to sue
 - ◆ The CAA's definition of "air pollutant" and Section 111's language speak directly to regulation of carbon pollution from power plants
 - ◆ Congress delegated to EPA the decision whether and how to regulate CO₂ emissions from power plants

President Obama's Climate Action Plan (June 25, 2013)



CO₂ Limits for Power Plants

- ❑ New Source Performance Standards (NSPS) for new, modified and reconstructed power plants under CAA Section 111(b) based on the application of carbon capture and storage technology
- ❑ Emission Guidelines for existing power plants under CAA Section 111(d)
 - ◆ Called the “Clean Power Plan”
 - ◆ Emission goals based on a combination of heat rate improvements, generation shifting from coal to natural gas, and generation shifting from coal to renewable energy
 - ◆ Estimated to reduce power sector CO₂ emissions to 32 percent below 2005 levels by 2030
 - ◆ Stayed by the Supreme Court on on February 9, 2016

Additional GHG Rules

| | |
|--|----------------------------|
| Methane NSPS for the Oil and Natural Gas Sector | Finalized June 3, 2016 |
| Aircraft GHG Endangerment Finding | Finalized August 15, 2016 |
| Methane Emission Limits for Landfills | Finalized August 29, 2016 |
| Phase II GHG Limits for Medium and Heavy Duty Vehicles | Finalized October 25, 2016 |
| Midterm Evaluation for MY2022 – 2025 Light Duty Vehicles | Finalized January 12, 2017 |

President Trump's Inauguration (January 20, 2017)



Trump Executive Actions

| | |
|--|---|
| Endangerment Finding | No formal action |
| Phase II GHG Limits for MYs 2022-2055 cars | April 13, 2018 MTE finding the MY2022-2025 standards should be revised; proposed revision at OMB for review |
| Power Plant NSPS | No formal action |
| Clean Power Plan | Proposed repeal rule on October 16, 2017; Advance notice of potential replacement on December 28, 2017 |
| Aircraft GHG Endangerment Finding | No formal Action |

Trump Executive Actions (cont'd)

| | |
|---|---|
| Methane NSPS for the Oil and Natural Gas Sector | Proposals to stay the limits for two years released on June 16, 2017 and November 8, 2017; small rule changes finalized on March 12 |
| Methane Emission Limits for Landfills | EPA issued a 90 day administrative stay on August 29, 2017; rule is back in effect but EPA is taking no steps to implement it |

For Further Information

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