



# U.S. Policy and Regulatory Action on Methane: Environmental Protection Agency

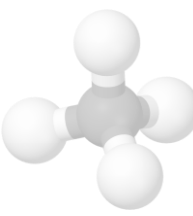
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Agenda Item 7 – 31<sup>st</sup> Session of the Committee on Sustainable Energy

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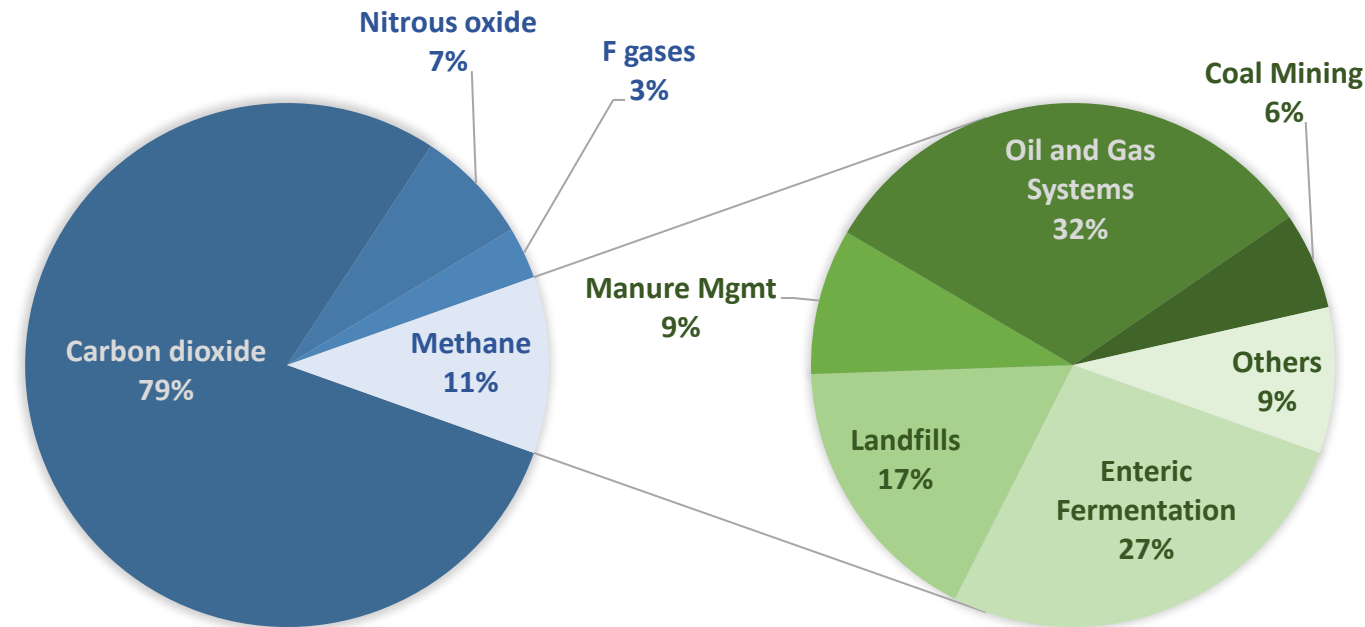
# Overview

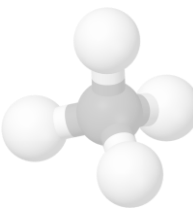
- US Methane Emissions
- Data collection / reporting and inventory developments
- Sector-specific regulatory and policy approaches
  - Oil & gas sector
  - Coal
- Inflation Reduction Act of 2022: forthcoming investments and regulations
- International engagement through Global Methane Initiative, Climate and Clean Air Coalition

# U.S. Methane Emissions

- 11 percent of total greenhouse gas (GHG) emissions in the United States in 2020
- Second most abundant GHG emitted
- Key emissions sectors include landfills, enteric fermentation, manure management, oil and gas, and coal mining

U.S. Methane Emissions by Gas and Source, 2020

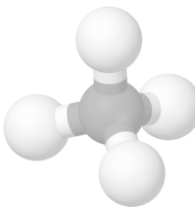




# U.S. GHG Data: GHGRP and GHG Inventory

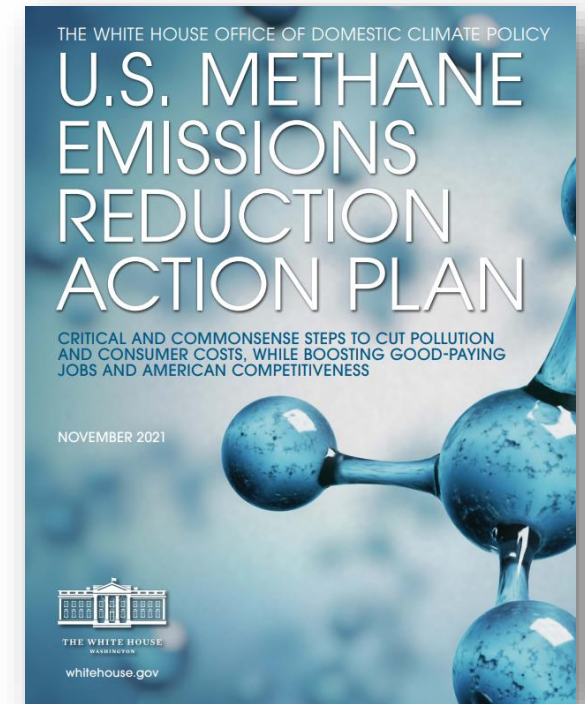
- EPA plays a lead role in developing and improving data on methane emissions to inform the public, support mitigation efforts, and inform policymaking
- **Greenhouse Gas Reporting Program**
  - Mandatory annual reporting of GHG emissions from sectors across the economy, including oil and natural gas
  - In April 2022, EPA proposed significant amendments to specific provisions of the GHGRP to improve the quality of the data collected under the program.
  - EPA is also requesting comment on potential future revisions that would expand the GHGRP to several new source categories
- **GHG Inventory**
  - EPA holds an annual stakeholder process to discuss new data available to improve the GHG Inventory
  - Recent improvements to quantification of U.S. emissions from oil and gas systems:
    - Addition of an estimate for post-meter methane leakage
    - Incorporation of satellite-derived estimates for large well blowout events
    - Improved quantification of emissions from abandoned wells

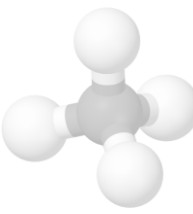
# U.S. Methane Emissions Reduction Action Plan



The *U.S. Methane Emissions Reduction Action Plan* redoubles efforts from across the government to dramatically cut U.S. methane emissions.

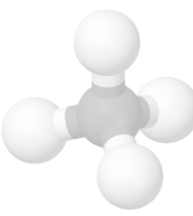
- Addresses methane emissions from all key sectors
- Documents both existing and planning activities across the U.S. government
- Includes incentive-based, voluntary partnership programs and regulatory actions
- Reinforces U.S. international leadership to address methane emissions on the global scale





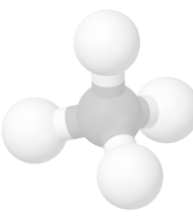
# EPA Oil & Gas Regulations

- **EPA issued a proposal in November 2021 to reduce methane emissions from oil & gas sector**
  - Requires states to reduce methane emissions from hundreds of thousands of existing sources;
  - Expands and strengthens standards issued in 2012 and 2016 for methane and VOCs from new, modified and reconstructed sources; and
  - Encourages the use of innovative methane detection technologies and other cutting-edge solutions
- **Some key features of the November 2021 proposal**
  - Proposed standards for production, gathering, processing, transmission and storage facilities:
    - Routine leak detection and repair (LDAR) at well sites and compressor stations
    - Flexibility to use advanced monitoring technologies
    - Zero-emission standard for pneumatic controllers
    - Prohibition on venting of associated gas
    - Standards for liquids unloading operations
    - Standards for storage vessels, reciprocating compressors, centrifugal compressors, pneumatic pumps



# EPA Oil & Gas Regulations

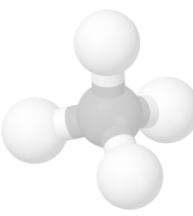
- **Significant climate, public health and economic benefits**
  - Reductions of ~920 MMT CO<sub>2</sub>-e of methane, 12 million tons of VOCs, 480,000 tons of HAPs through 2035
  - Recover \$690 million of otherwise wasted natural gas in 2030 alone
  - Minimal impacts on energy production or prices
- **Next steps:**
  - EPA received nearly 500,000 written comments
  - Supplemental proposal will address key implementation details and may revise or expand on November 2021 proposed standards
  - Final rule expected in spring 2023



# Coal Sector – Policy Framework

- No federal level regulation/incentives of methane from coal mining
- Two types of market carbon types:
  - Voluntary Markets
  - Compliance Markets
- Projects listed on registries:
  - California Cap-and-Trade
- Other incentives:
  - State renewable energy credits: CO, IN, PA, UT, OH
  - Royalty relief in CO, UT, WY and lease amendments in CO, UT
- EPA develops tools and resources for methane reduction:
  - **domestically** through its Coalbed Methane Outreach Program (CMOP)
  - **internationally** through support of the Global Methane Initiative (GMI) and collaborative work with international Partners

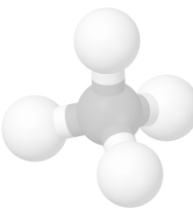




# New Projects in the United States – VAM, AMM and Flares

- May 2022 – McElroy/Marshall VAM Project operated for 10 consecutive years
  - Generated 1.6 million tonnes CO<sub>2</sub>e emission reductions
- July 2022 - New VAM project will be announced soon – first U.S. VAM project commissioned since McElroy
- Two - three additional VAM projects planned in 2022-2023
- 27 new AMM projects registered in CARB
- 22 AMM projects issued CARB offset credits
- Over 1.4 mil t/CO<sub>2</sub>e in emission reductions
- 4-5 unsuccessful projects at low producing wells
- Additional projects planned for 2022 - 2023





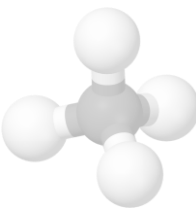
# Inflation Reduction Act of 2022:

Methane Emissions and Waste Reduction Incentive Program

## **IRA provides new grant and fee authorities to reduce methane emissions**

**Establishes a waste emissions charge** for methane from applicable facilities that report more than 25,000 metric tons of CO<sub>2</sub> equivalent per year to the GHG Reporting Program and that exceed statutorily specified waste emissions thresholds.

- Covers upstream and midstream facilities in the GHG Reporting Program
- Fee starts at \$900 per ton in 2024 and increases to \$1,500 in 2026
- Includes an exemption for facilities in compliance with regulations under 111(b) and (d)
- EPA directed to complete rulemaking to revise GHG Reporting Program regulations for oil and natural gas facilities within 2 years



# Inflation Reduction Act of 2022:

Methane Emissions and Waste Reduction Incentive Program

**Allocates \$1.55 billion to reduce methane emissions** through financial assistance (grants, rebates, contracts, loans, and other activities) and technical assistance.

## **Use of funds can include:**

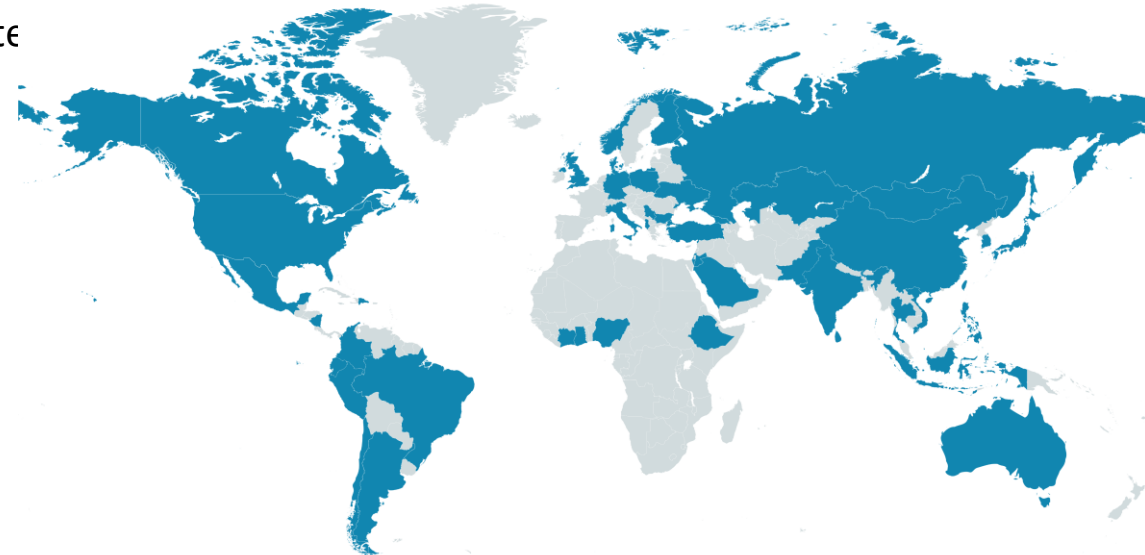
- Supporting greenhouse gas reporting
- Methane emissions monitoring
- Activities to reduce methane and other greenhouse gas emissions (e.g., deploying equipment to reduce emissions, supporting innovation, shutting in and plugging wells)
- Activities to mitigate health effects in low-income and disadvantaged communities, improve climate resiliency and support environmental restoration
- Implementing the waste emissions charge

**IRA also provides separate \$20 million fund to support methane monitoring**

# Global Methane Initiative (GMI)



- GMI is an international partnership of 45 countries and hundreds of private sector and multilateral partners focused on reducing methane emissions across five key sectors: oil & gas, coal mining, landfills, agriculture (manure), wastewater.
- Aims to provide the tools, resources, and expertise to enable countries to reduce methane quickly and cost-effectively
- US Support for GMI includes hosting the secretariat and providing sector-specific technical support
- GMI is one mechanism for US support for the Global Methane Pledge



■ GMI Partner Countries

## Strategic Alliances



# Global Methane, Climate and Clean Air Forum:

a joint event sponsored by GMI and CCAC

26–30 September 2022, Washington, D.C.

- Join us in September!
- High-profile in-person event that will convene experts and policymakers; provide an opportunity to discuss ambitious methane abatement strategies; and pave the way for methane announcements at COP27
  - High-level plenary sessions will focus on cross-cutting themes: fast action, policy, finance
  - In-depth joint technical sessions will do “deeper dive” on specific topics and sectors: oil & gas, waste, agriculture, coal mining, science, other short-lived climate pollutants
- Expected attendance: Up to 300 in-person, including GMI and CCAC partner country delegations, private sector, NGO and multilateral organizations
- Virtual participation / livestreaming of plenary sessions and some joint technical sessions
- Venue: Crystal City Marriott, Crystal City, Virginia