



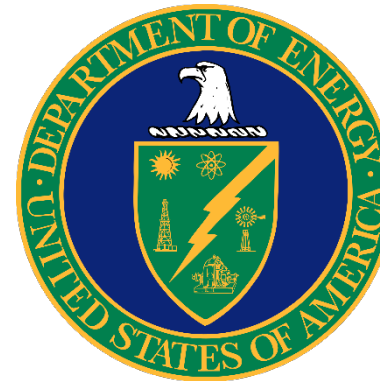
EPA Methane Policy Updates

JARON HILL



Natural Gas Benefit Vs. Methane Emissions

- Natural gas keeps its climate change advantage over coal in power generation when less than **3.2%** of throughput leaks from wellhead to power plant (Alvarez et al. 2012)
- EDF methane leak studies
- DOE funding for leak detection technology
- Investor Pressure (ESG Criteria)
- Sustainability Reports



Financial Analysis

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ESG Analysis

Recent or Pending EPA Methane Actions

- NSPS Subpart 0000a “Policy Package”
 - Proposal released on 9/24/2019

- NSPS Subpart 0000a “Technical Package”
 - Final rule is pending OMB review

- Greenhouse Reporting Rule, Part 98
 - EPA currently developing rule revisions

NSPS Subpart 0000a “Policy Package”

NSPS Subpart 0000a Policy Package

Industry Opposition

Option 1

- Remove the transmission and storage segment from the oil and natural gas production source category
- Remove methane as a pollutant for other segments, focus on VOC

Option 2

- Remove methane as a pollutant for all segments currently in the rule

NSPS Subpart 0000a Policy Package



- EPA argues including methane in the 2016 rule was redundant since all the controls for methane also control VOC
- EPA states this proposal “will not affect the amount of methane emission reductions that those requirements will achieve.”
- Eliminating methane from this new source performance standard removes the CAA requirement to develop rules for existing oil and gas sources
- Methane as a VOC?

NSPS Subpart 0000a Policy Package

- EPA argues and requests comment on broad legal topics:
 - The transmission and storage segment is a separate source category and a needed a new significant contribution and endangerment finding.
 - As for including methane, EPA asks whether the agency can add new pollutants to a source category without a significant contribution and endangerment finding for each? Currently EPA is only required to have a rational basis to add a new pollutant.
 - To set a new source performance standard (NSPS) for a source category, the Clean Air Act requires EPA to show emissions of a pollutant “causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare”

NSPS Subpart 0000a Policy Package

Legal Topics Continued:

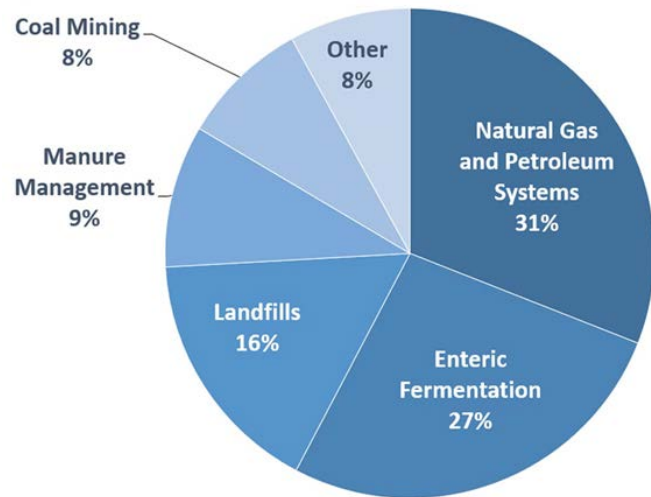
- How should EPA determine whether a global pollutant like methane contributes significantly to air pollution and impacts human health?
- How should EPA determine a threshold under which the contribution of a GHG is no longer a threat to public health?

NSPS Subpart 0000a Policy Package

Legal Topics Continued:

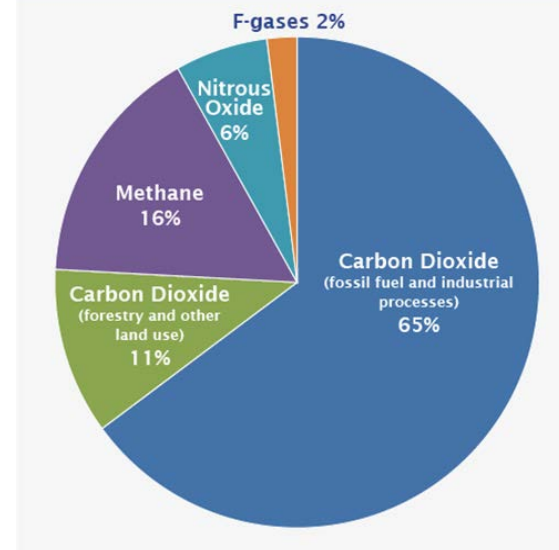
- Should international sources be considered?
- Should natural emission sources be considered?

2017 U.S. Methane Emissions, By Source

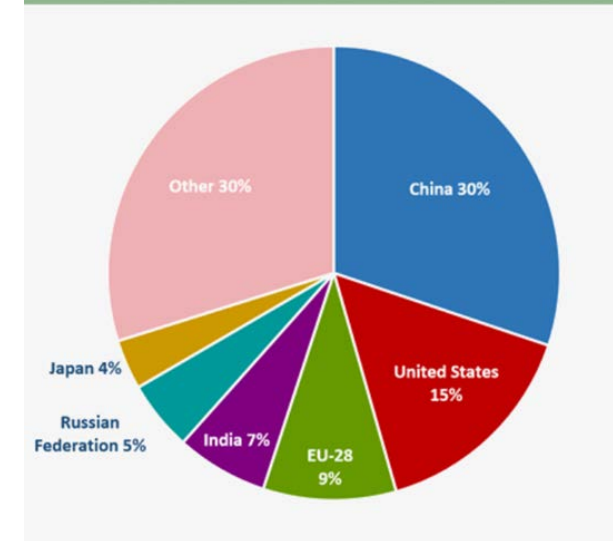


U.S. Environmental Protection Agency (2019). Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2017

Global Greenhouse Gas Emissions by Gas



2014 Global CO₂ Emissions from Fossil Fuel Combustion and Some Industrial Processes



NSPS Subpart 0000a “Technical Package”

NSPS Subpart 0000a Technical Package

- Proposed on October 15, 2018, final rule is pending
- Major proposed updates:
 - Reduced leak monitoring frequencies
 - Clarifies when well flowback emissions need to be controlled
 - Removes requirement for 3rd party professional engineer to certify control device design and infeasibility to control pneumatic pumps
- EPA staff suggested this final rule would be published before end of year but may be delayed with OMB review

Greenhouse Gas Reporting Program, Part 98

GHGRP Part 98 Revisions

- EPA is reviewing the entire reporting rule to fix issues and reduce burden
- Review strategy for midstream sources:
 - Reduce direct measurement as only option, develop emission factors
 - Allow direct measurement as an option to show reductions
 - Eliminate recordkeeping requirements not directly related to emissions
 - Align processing plant definition with NSPS Subpart 0000a, eliminate amine units as processing plants

Questions?
