

EPA'S OIL AND GAS GHG DATA FROM THE GHG INVENTORY (GHGI) AND THE GREENHOUSE GAS REPORTING PROGRAM (GHGRP)

Stakeholder Webinar

November 17, 2021

AGENDA

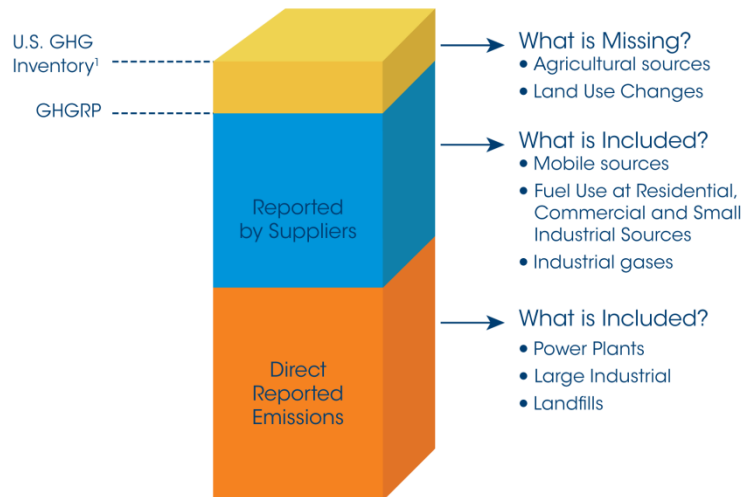
- 1:00-1:10 *GHG Inventory Overview (EPA)*
- 1:10-1:30 *GHGRP (EPA)*
- 1:30-1:40 *Anomalous Leak Events GHGI Update under Consideration (RTI)*
- 1:40-2:25 *Recent Studies on Well Blowouts*
- Sudhanshu Pandey (SRON)
 - Daniel Cusworth (University of Arizona)
 - Bram Maasackers (SRON)
- 2:25-2:35 *Break*
- 2:35-2:50 *New data: comprehensive aerial survey in the New Mexico Permian Basin reveals missing super emitters, Yulia Chen (Stanford)*
- 2:50-3:05 *A National Estimate of Methane Leakage from Pipeline Mains in Local Natural Gas Distribution Systems, Zach Weller and Joe Von Fischer (Colorado State University)*
- 3:05-3:20 *Post-Meter GHGI Update under Consideration (ERG)*
- 3:20-3:35 *Measurements of methane emissions from marginally producing oil and gas wells indicate they are a disproportionate source of methane relative to production, Amy Townsend-Small (U. of Cincinnati)*
- 3:35-3:50 *Other GHGI Updates under Consideration (ERG)*
- 3:50-4:00 *Close (EPA)*

GHG INVENTORY OVERVIEW

EPA GHG DATA: U.S. GHG INVENTORY (GHGI) AND GHG REPORTING PROGRAM (GHGRP)

- Inventory of U.S. Greenhouse Gas Emissions and Sinks (GHGI) tracks total annual U.S. emissions across all sectors of the economy using national-level data
- GHGRP collects detailed emissions data from large greenhouse gas emitting facilities in the United States, as directed by the Clean Air Act
 - GHGRP covers most, but not all, U.S. GHG emissions
 - GHGRP does not include agriculture, land use, and small sources

GHGRP Covers the Majority of U.S. GHG Emissions



Task	Inventory of U.S. GHG Emissions and Sinks	Greenhouse Gas Reporting Program
Find total U.S. emissions	✓	
Review trend data for the past 20 years	✓	
Browse a map to find largest emitters in your area		✓
Compare facility emissions across an industrial sector		✓
Find <u>reported</u> emissions by state		✓

GHGI OVERVIEW

- **GHGI**

- Official U.S. Government data on national GHG emissions and sinks over time by gas, source/sink and economic sector
- CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, and NF₃
- Fulfills U.S. reporting commitment under the UNFCCC
- Covers a time series beginning with 1990

- **Oil and Gas in the GHGI**

- Oil and gas in GHGI covers hundreds of types of emission sources
- Emissions calculated using GHGRP, research studies, national level activity data, etc.
- Annual stakeholder process to discuss new data and improvements to GHGI data
- Stakeholder website (<https://www.epa.gov/ghgemissions/natural-gas-and-petroleum-systems>)
 - Information on workshops and memos on updates under consideration
 - Full time series of data and information on methods

TRENDS IN CH₄ AND CO₂ EMISSIONS FROM OIL AND GAS SYSTEMS

1990-2019 Trends and Key Drivers

- CH₄-decrease of 17%
 - Distribution (upgrades to pipeline and stations)
 - Transmission and storage (changes in compressor types)
- CO₂-increase of 102%
 - Oil and gas production (increased flaring)

2018-2019 Trends and Key Drivers

- CH₄-increase of 4%
 - Oil and gas production (increase in emissions from pneumatic controllers)
- CO₂-increase of 19%
 - Oil production (increased flaring of associated gas)

