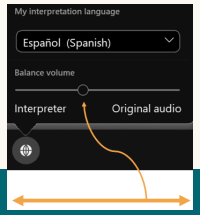
Interpretation | Interpretación

Computers

1. Find the interpretation channel located on the bottom left of your screen (looks like a globe).
2. Click on the globe and then select a language channel by clicking on “My Interpretation Language”. Select “English” or “Spanish” on the drop-down menu.
3. You may move the slider bar in the selection area to adjust the volume of either the Spanish interpreter or the English interpreter.



Computadoras

1. Encontrar el canal de interpretación ubicado en la parte inferior izquierda de su pantalla (parece un globo terráqueo).
2. Haga clic en el globo terráqueo y después seleccione un canal de idiomas haciendo clic en “Mi idioma de interpretación”. Seleccione “Inglés” o “Español” en el menú desplegable.
3. Puede mover la barra deslizante en el área de selección para ajustar el volumen del intérprete de español o del intérprete de inglés.

Cell Phones, Tablets

1. In the meeting controls, tap … “**More**”
2. Select “**Language Interpretation**.” Tap “**English**”

Celular, Tableta (Móvil)

1. En los controles de la reunión, haga clic en … “**More**” (Más)
2. Seleccione “**Language Interpretation.**” Haga clic en “**Spanish**”

NM Climate Action Plan

Industry Sector Virtual Meeting

Jessica Hejny, Control Strategies Manager
Air Quality Bureau

Mark Edwards, Greenhouse Gas Emissions Inventory Scientist
Climate Change Bureau

Amy Rosebrough, Climate Action Program Coordinator
Climate Change Bureau

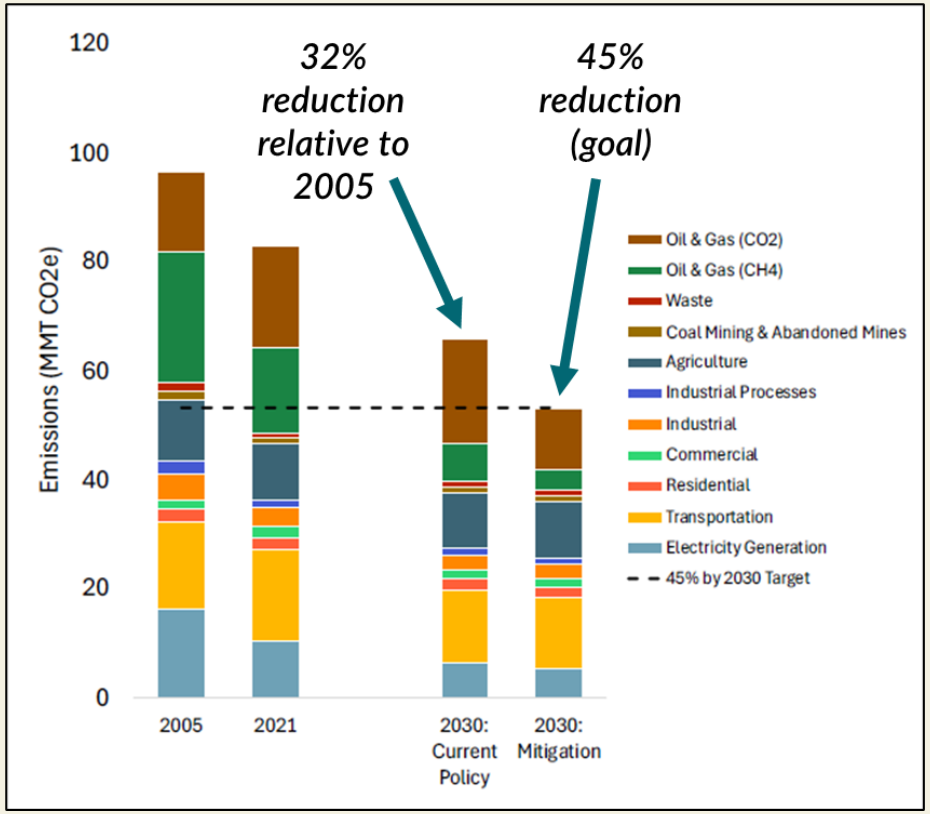
May 15, 2025

New Mexico Greenhouse Gas Emissions

New Mexico GHG Emissions

- Greenhouse gas emissions inventories provide a science-based best estimate of greenhouse gas emissions for a particular time and place

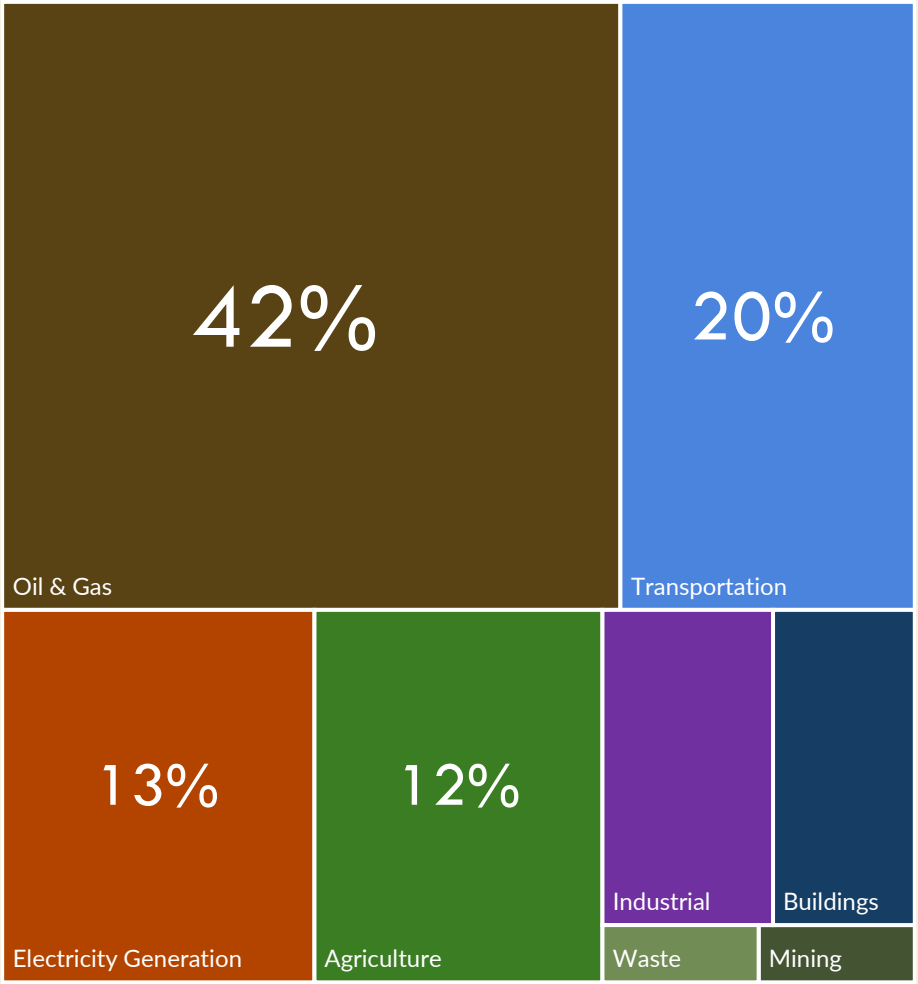
  - NMED-led analysis of oil & gas industry with EPA and EIA data for other industries
  - 2021 inventory shows that GHG emissions decreased by 14% from 2005 to 2021
  - To achieve 45% reduction by 2030 (Executive Order 2019-003), additional climate policy measures need to be developed and implemented
  - NM's Climate Action Plan will provide a roadmap for the policies needed to achieve NM's climate goals



Source: New Mexico Greenhouse Gas Emissions Inventory and Forecast: 2021 Emissions Inventory and 2030–2050 Forecast, December 2024 (E3)

New Mexico 2021 GHG Emissions

2021 NM Relative GHG Emissions By Sector



Data Source: *New Mexico Greenhouse Gas Emissions Inventory and Forecast: 2021 Emissions Inventory and 2030–2050 Forecast, December 2024 (E3)*

- The four top GHG-emitting sectors in New Mexico are:
  - Oil & gas 42%
  - Transportation 20%
  - Electricity Generation 13%
  - Agriculture 12%

  87% of total emissions

- NM's Climate Action Plan will include measures across *all* sectors of the economy that will provide GHG reductions, co-benefits, align with community values, and will be cost-effective and feasible

Climate Action Planning

NM Climate Action Plan

[1] To reduce climate pollution 45% by 2030 (compared to 2005).
[2] To lead New Mexico to net zero climate pollution by 2050.

PROGRAMS, POLICIES AND PROJECTS THAT FOSTER COMMUNITY HEALTH, WORKFORCE OPPORTUNITIES & ECONOMIC DEVELOPMENT.

DUE DECEMBER 2025

What Will the CAP Give NM?

1) 2023 GHG Inventory
2) GHG Emissions Projections
3) Quantified Emissions Reductions by Measure
4) Community & LIDAC Benefits Analysis
5) Review of Authority and Timeline to Implement
6) Cost Estimates and Funding Options
7) Workforce Planning Analysis
8) Stakeholder and Community Engagement
9) Tribal Government Engagement
10) Plan to Meet New Mexico's Emissions Targets

Climate Action Planning Timeline

- Round 2 Engagement.
- Develop Final Measure List.

- Complete Quantitative Analyses.
- Write CAP Report.

- Leadership Review
- Submit to EPA and Publish CAP

December 2025 – July 2027: Status Update Phase

Measure Selection Criteria

Measures will be selected using 5 main criteria:

- IMPACT OF CLIMATE POLLUTION REDUCTIONS
- COST AND AVAILABILITY OF FUNDING
- FEASIBILITY OF IMPLEMENTATION
- TRANSFORMATIVE IMPACT
- COMMUNITY VALUES

Community Engagement Goals

Successful climate action planning looks different in different parts of the state. We sought to hear what participants would like it to look like in their community and statewide.

Personal Values

Community Priorities

State Priorities

Round 1 Engagement

2/20 - Gallup

2/27 - Hobbs

3/6 - Tucumcari

3/13 – Silver City

3/20 – Las Vegas

3/27 - Albuquerque

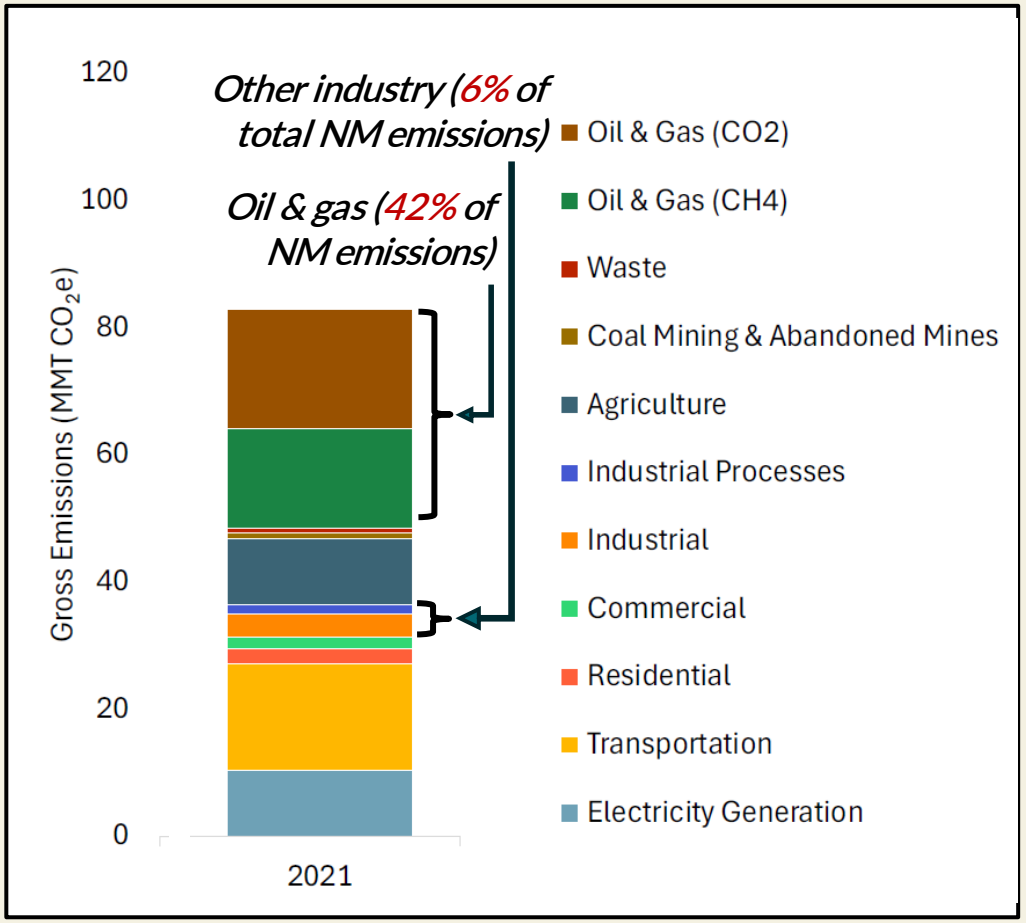
4/3 – Statewide Virtual Meeting | 4/10 – Legislator Briefing

#

Industry Sector

Industry Sector Emissions

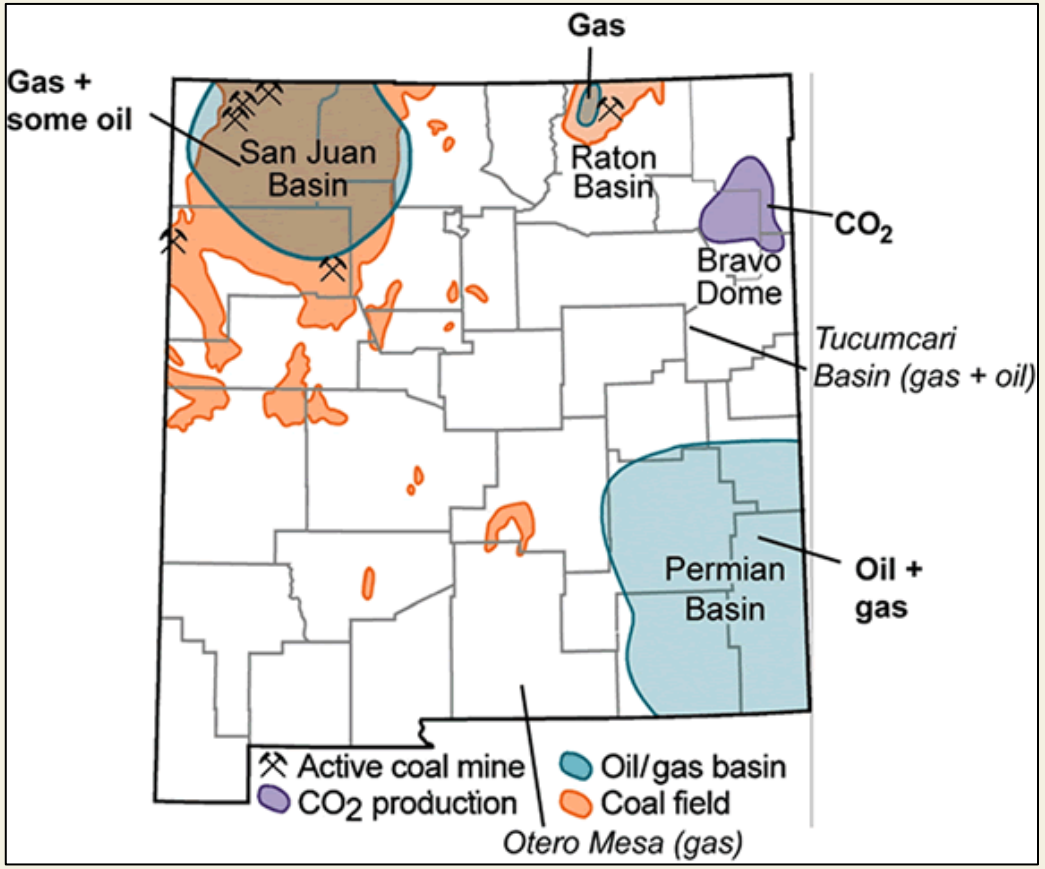
- Most industrial emissions are from the oil and gas industry
- Oil and gas emissions:
  - natural gas leaks (methane)
  - combusting natural gas to power equipment (carbon dioxide)
- Other industrial emissions are from on-site combustion of fossil fuels and from processes that emit greenhouse gases like HFCs



Source: New Mexico Greenhouse Gas Emissions Inventory and Forecast: 2021 Emissions Inventory and 2030–2050 Forecast, December 2024 (E3)

Oil & Gas in New Mexico

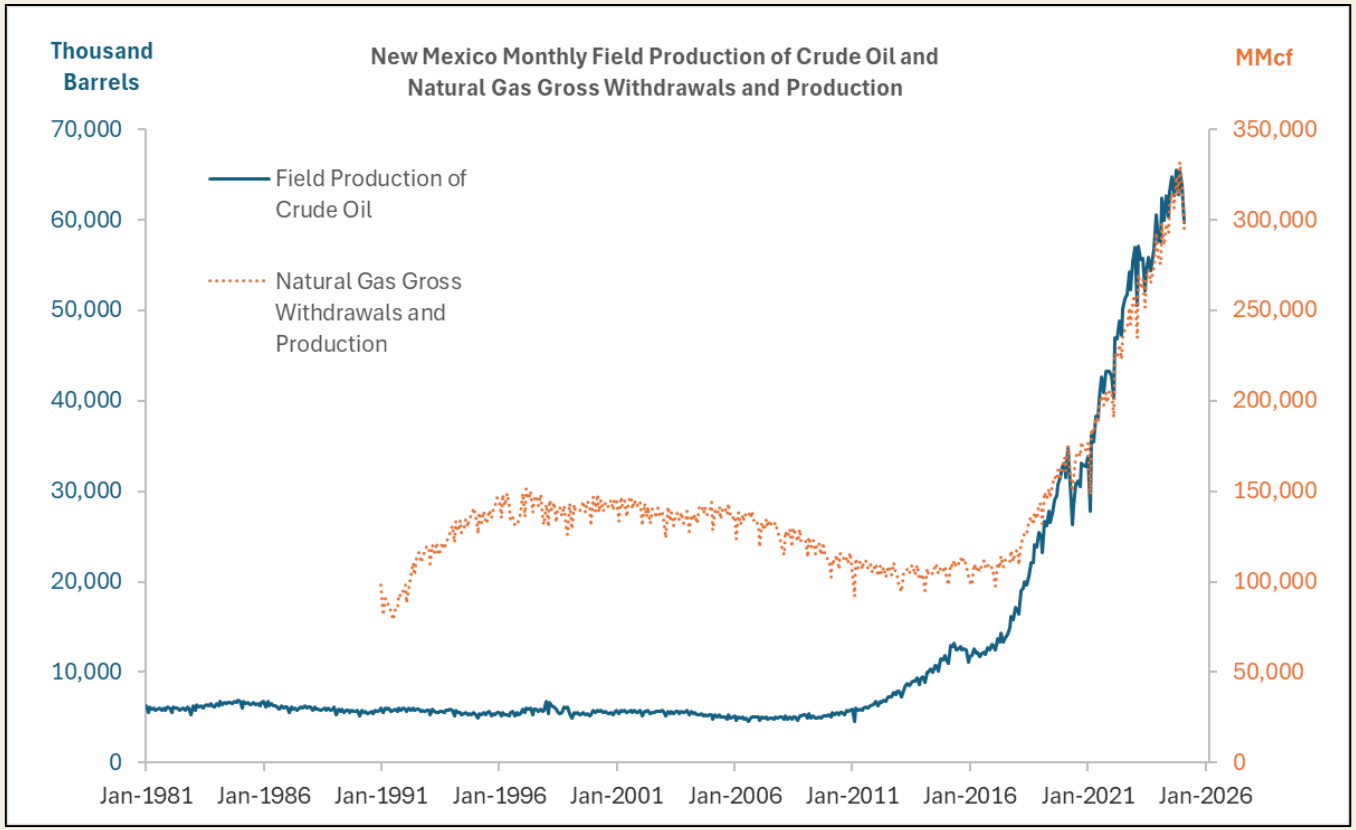
- NM responsible for 14% of US crude oil and 7% of US natural gas production in 2023
  - 2nd largest producer of oil in USA
- Permian and San Juan Basins most productive oil and gas regions in NM, respectively



Source: New Mexico Bureau of Geology & Mineral Resources

Oil & Gas in New Mexico

- Increase in production:
  - Oil production increased 7.5× from 2005 to 2021, and natural gas production increased by over 35% during that interval.
  - However, O&G industry emissions *decreased* slightly from 2005 to 2021



Data Source: U.S. Energy Information Administration (accessed 5/7/2025)

Oil & Gas GHG Emissions Inventory

- Building the 2021 O&G emissions inventory:
  - Data from:
    - EPA Greenhouse Gas Reporting Program (GHGRP)
    - NMED Air Quality Bureau emissions inventory
    - EMNRD Oil Conversation Division datasets
    - Academic studies
  - 2020 emissions (ERG) were scaled by production volumes and well counts to 2021 (E3) for state-wide comparison to other sectors

Oil & Gas GHG Emissions Inventory

- Emissions are presented by gas, category, source, and basin

Gas

Emission Category

Table E-1. GHG Emissions by Category (Metric Tons)

Emission Category	Annual CH_4 Emissions	Annual CO_2 Emissions	Annual CO_2e Emissions
Production	387,824	6,836,720	17,307,968
Gathering and Boosting	126,013	6,158,405	9,560,756
Natural Gas Processing	19,210	4,552,987	5,071,657
Transmission and Storage	13,382	629,264	990,567
Inactive Oil and Gas Wells	784	23.5	21,192
Total	**547,212**	**18,177,400**	**32,952,130**

Emission Source

Table E-3. GHG Emissions by Emission Source (Metric Tons)

Emission Source	Annual CH_4 Emissions	Annual CO_2 Emissions	Annual CO_2e Emissions
Combustion	76,632	13,177,750	15,246,811
Equipment Leaks	196,139	5,699	5,301,442
Pneumatic Controllers	139,491	24,820	3,791,082
Acid Gas Removal Units	0	2,047,374	2,047,374
Miscellaneous Flaring	5,026	1,173,985	1,309,690
All Others	129,926	1,747,771	5,255,731
Total	**547,212**	**18,177,400**	**32,952,130**

Source: New Mexico Oil and Gas Greenhouse Gas Emissions Inventory for Year 2020 (ERG)

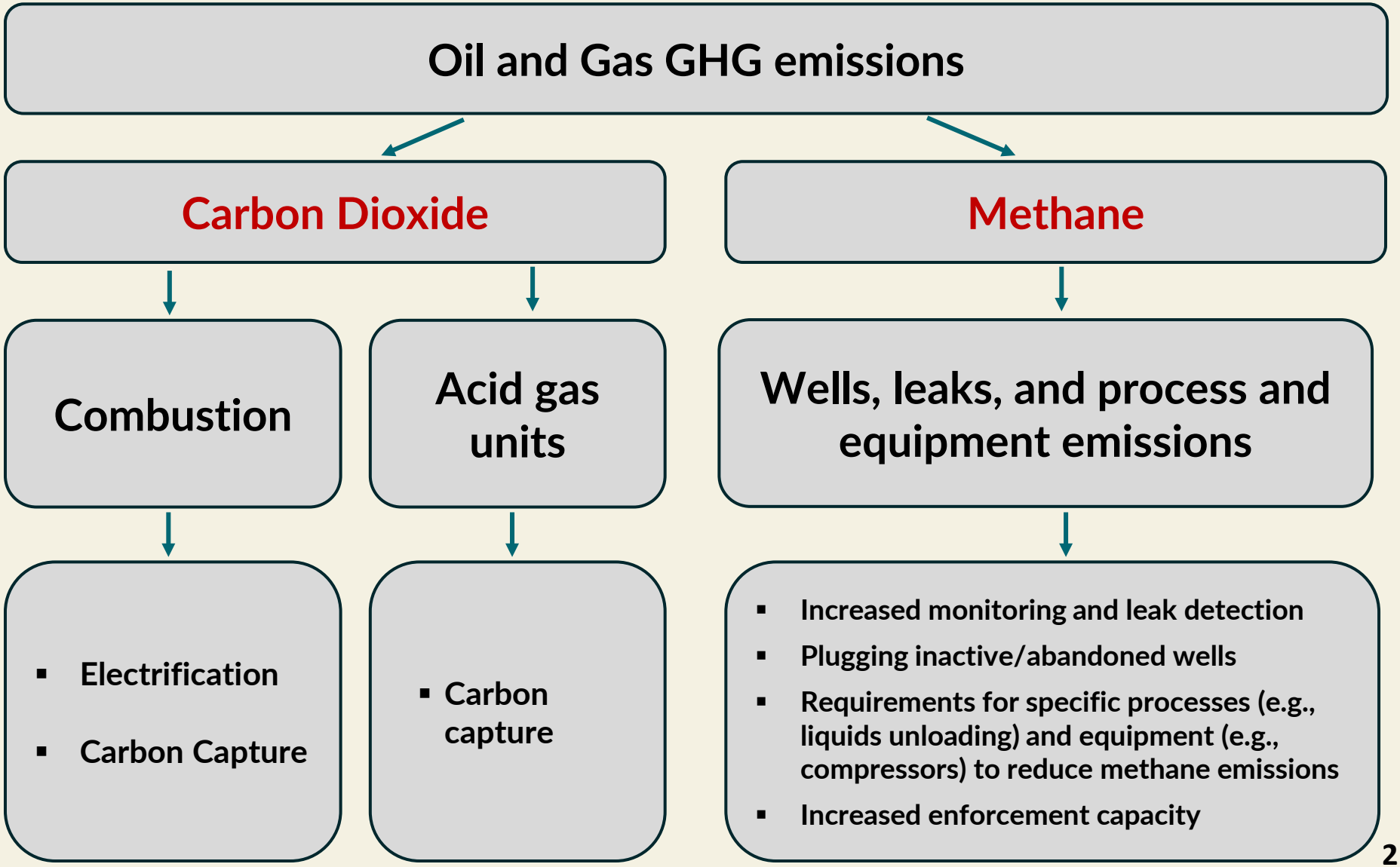
2023 Oil & Gas GHG Inventory

- 2023 O&G emissions inventory is being developed now
  - Expected to reflect reductions in methane emissions due to regulatory initiatives, but increase in CO_2 emissions due to increased production
  - Ozone Precursor Rule (Part 50) (NMED)
    - Reduces ozone precursors (VOCs and NO_x) through requirements for oil and gas equipment and processes
    - Also provides significant methane reduction co-benefits
  - Methane Waste Rule (EMNRD OCD)
    - Requires >98% natural gas capture by 2027
    - Prevents routine venting or flaring

Climate Action Plan

- Strategy for Comprehensive Climate Action Plan measures:
  - ✓ Build upon existing state regulations
  - ✓ Broadly target both carbon dioxide and methane emissions
  - ✓ Identify specific sources of carbon dioxide and methane
  - ✓ Create measures to reduce emissions
  - ✓ Link measures to existing regulatory authority (“roadmap to implementation”)

Oil and Gas Proposed Climate Strategy



Potential Measures to Achieve Carbon Dioxide Reductions

GOAL	SOURCE	POTENTIAL MEASURES
Reduce carbon dioxide emissions from the oil and gas industry at a level sufficient to meet 2030 statewide GHG emissions goal	Combustion	Requirements or incentives to electrify oilfield combustion equipment (e.g., turbines) Requirements to capture CO_2 from combustion sources, either sequestering the CO_2 or using it for enhanced oil recovery
	Acid Gas Units	Requirements to capture CO_2 separated from natural gas stream at acid gas removal units, either sequestering the CO_2 or using it for enhanced oil recovery

Potential Measures to Achieve Methane Reductions

GOAL	SOURCE	POTENTIAL MEASURES
Reduce methane emissions from the oil and gas industry at a level sufficient to meet 2030 statewide GHG emissions goal	Inactive/Abandoned Wells	Accelerate the identification and plugging of inactive/abandoned wells: ▪ Identify responsible parties ▪ Mandate remediation ▪ Increase state funding for existing programs ▪ Change state well bonding requirements
	Leaks	▪ Increase monitoring and leak detection requirements for operators ▪ Use remote sensing data to identify sources of unintended emissions ▪ Increase the capacity of State agencies to enforce regulations to reduce methane emissions
	Process and Equipment Emissions	▪ Develop rules that build upon current regulation to further reduce emissions from specific processes and equipment ▪ Increase enforcement capability

Questions and Feedback

Additional Slides

2021 NM Oil and Gas Emissions

- Table 49 expands upon the table shown in the introductory slides that presents emissions from smaller sources in a single "all others" category:

Source: New Mexico Oil and Gas Greenhouse Gas Emissions Inventory for Year 2020 (ERG)

Table 49. GHG Emissions by Emission Source (Metric Tons)

Emission Source	Annual CH_4 Emissions	Annual CO_2 Emissions	Annual CO_2e Emissions
Combustion	76,632	13,177,750	15,246,811
Equipment Leaks	196,139	5,699	5,301,442
Pneumatic Controllers	139,491	24,820	3,791,082
Acid Gas Removal Units	0	2,047,374	2,047,374
Miscellaneous Flaring	5,026	1,173,985	1,309,690
Tanks	23,177	243,099	868,877
Associated Gas	3,651	695,755	794,333
HF Completions	5,047	626,332	762,595
Reciprocating Compressors	26,885	929	726,819
Liquids Unloading	22,574	3,203	612,689
Equipment Blowdowns	9,461	814	256,252
Pipeline Leaks	9,010	5,787	249,045
Produced Water	8,400	173	226,960
Mud Degassing	8,244	588	223,186
Dehydrators	922	170,434	195,339
Centrifugal Compressors	3,843	100	103,870
Pipeline Blowdowns	3,760	109	101,618
Pneumatic Pumps	3,188	383	86,458
Inactive Wells	784	24	21,193
Metering and Regulating Equipment	438	13	11,839
Tank Unloading	247	5	6,669
Transmission Storage Tanks	185	5	4,995
Storage Wells	66	2	1,784
Non-HF Workovers	44	16	1,210
Total	**547,212**	**18,177,400**	**32,952,130**

Measures from Electricity Sector that Intersect with Industry

Many measures developed for the electricity sector are relevant for industry. For example, a long-duration energy storage pilot project may involve hydrogen or gravity batteries that utilize preexisting abandoned oil wells:

Long Duration Energy Storage Pilot

Launch a pilot program to evaluate emerging Long Duration Energy Storage (LDES) technologies capable of providing storage for 10+ hours that are suitable for New Mexico's climate and energy landscape. Technologies under consideration may include gravity-based storage, molten rock thermal storage, and hydrogen, among others. The pilot will consider site-specific factors, nominal duration, average round trip efficiency, capacity, lifecycle emissions, cost, and community impacts

Reduce Emissions from Fossil Fuel Power Plants

Reduce combustion emissions from preexisting fossil fuel-fired power plants by 90% by 2030, for example by implementing carbon capture, utilization, and storage

Enhanced Geothermal

Incentivize enhanced geothermal through grants and revolving funds, amendments to renewable energy certificate accounting, investing in R&D to improve enhanced geothermal tech, and working with LIDAC and Tribal communities to develop projects that lower energy burden and create workforce and economic development opportunities.

Example of Methane Detection Using Airborne Observations

RESEARCH & ANALYSIS

The Near-Term Mitigation Opportunity of Super-Emitters - A Case Study in the Permian Basin

Published on: Mar 10, 2025

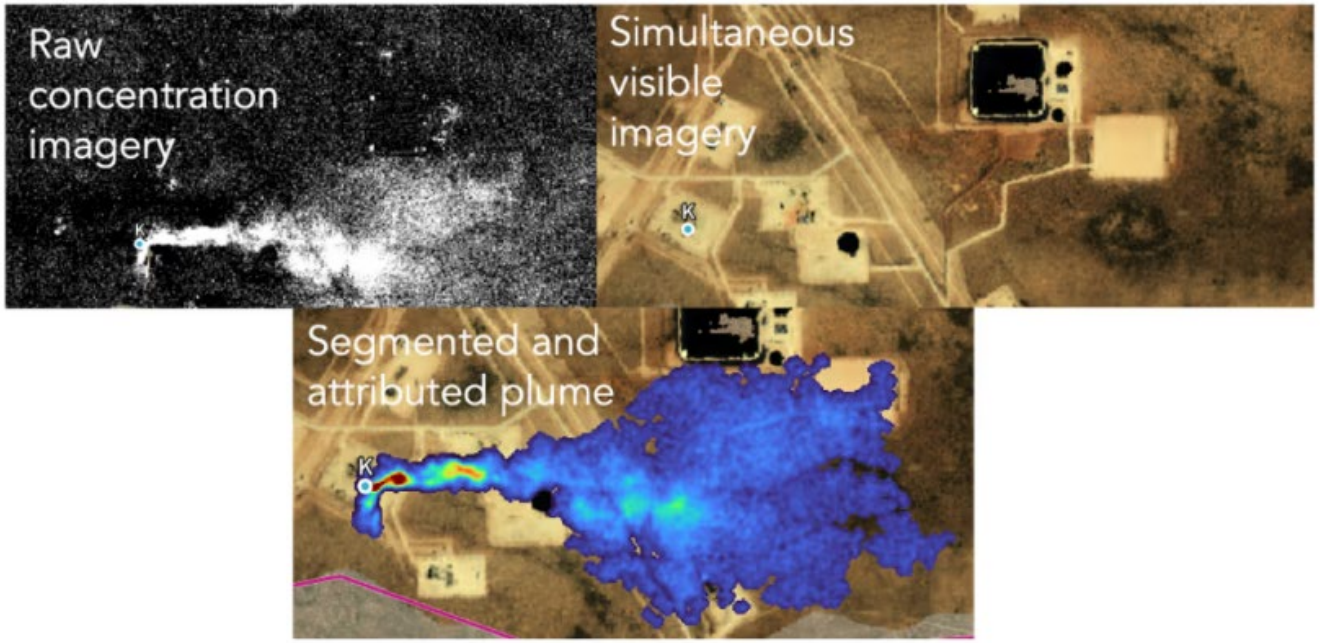


Figure 2. Example plume-emission measurement during the 2024 Carbon Mapper NM Permian campaign. Plume id: GAO20240517t154401p0000-K

Source: Carbon Mapper