Tackling Methane
in California

Ken Alex
Director of Project Climate

Berkeley Law | Center for Law, Energy, & the Environment

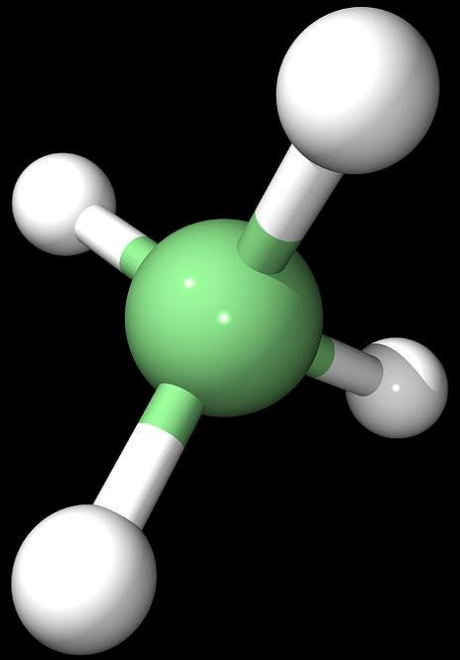
Part 1.

Meet Methane

Methane (CH_4) is a colorless, odorless, flammable gas.

It forms when organic material decays in sealed spaces (e.g., shale formations, landfills, cow stomachs).

Methane accounts for one-third of Earth's warming to date.



The Methane Opportunity

1. Cutting carbon emissions is not enough to avoid catastrophic climate “tipping points.”
2. Methane is far more potent than carbon dioxide, but it decays quickly in the atmosphere.
3. This means that cutting methane emissions can quickly reduce the pace of Earth’s warming, alongside decarbonization.

84x

stronger than CO2

Methane often represents wasted energy that can be captured or redirected for profit.

More than half of methane mitigation measures pay for themselves.

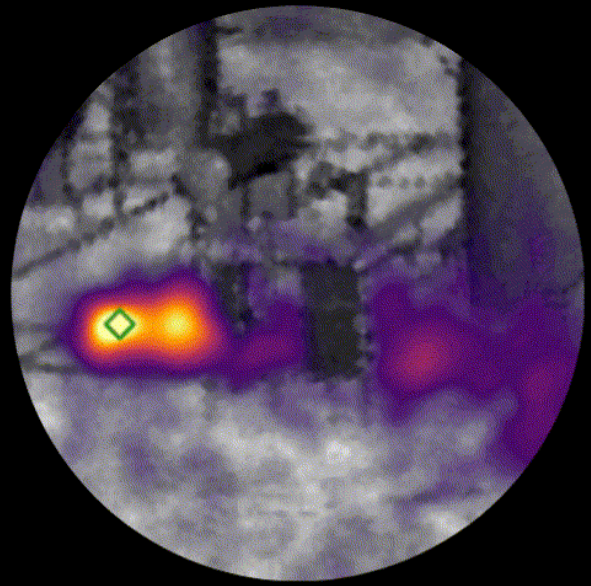


Image: CH4IQ

Part 2.

Methane Policies

SB 605 (2006)

Required CARB to develop a strategy for methane and other super-pollutants

SB 1383 (2016)

Requires a 40% reduction in methane by 2030 and a 75% cut in organic landfill waste by 2025

For livestock, provides grants for digesters and alternative manure management (CDFA) and includes manure biogas in the Low Carbon Fuel Standard (CARB)

For landfills, invests in recovery infrastructure and mandates organics collection

Scoping Plans (Latest in 2022)

CARB blueprint for climate mitigation, including methane strategies for livestock, landfills, and energy

Inflation Reduction Act (2022)

Federal law that funds methane research and monitoring

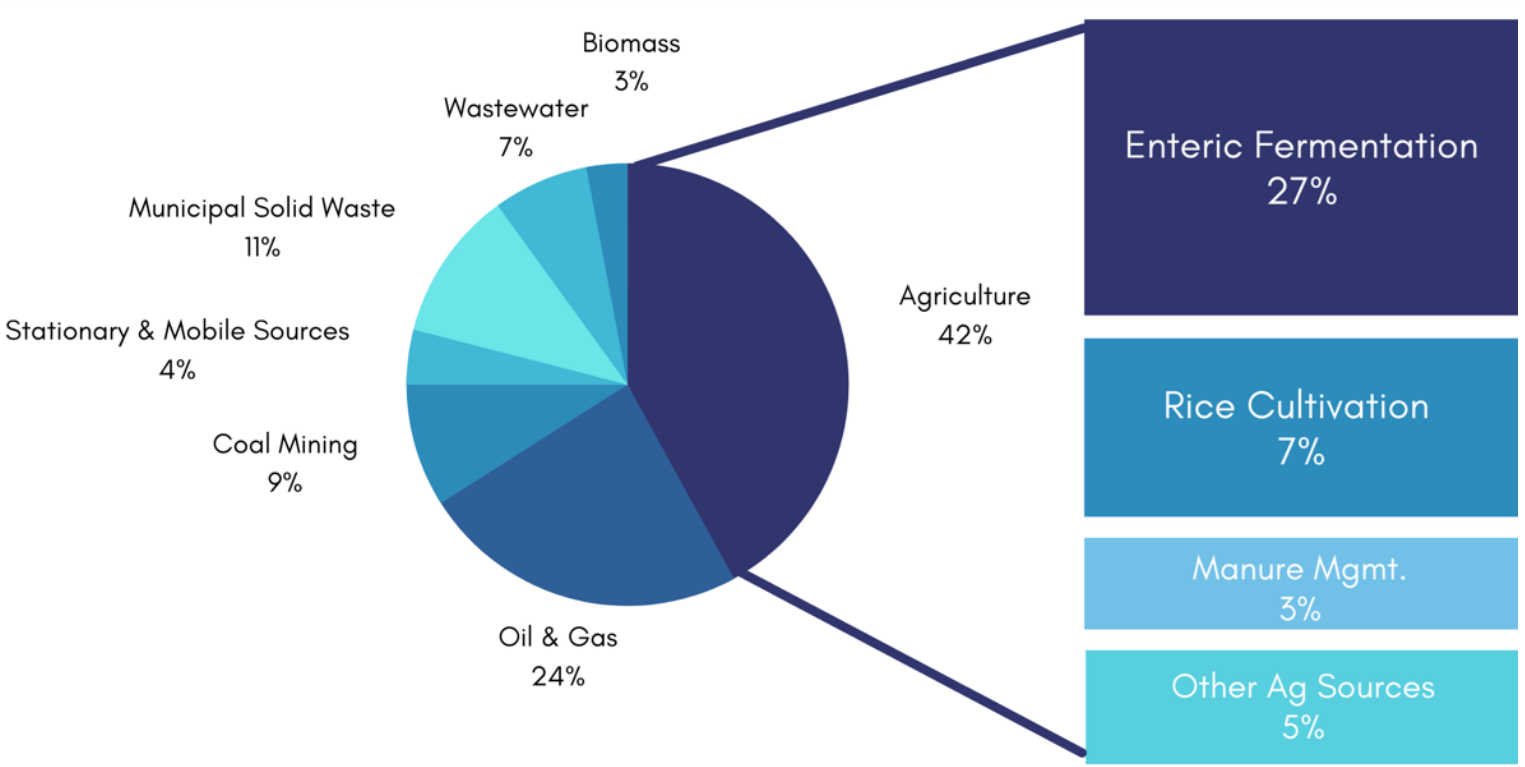
Taxes methane from high-emitting oil and gas facilities, making methane the first GHG to be federally taxed

Fee applies to facilities emitting over 25,000 tons of CO2 equivalent; Starts at $900/ton (2024) and increases to $1,500 per ton (2026)

Part 3.

Sectors

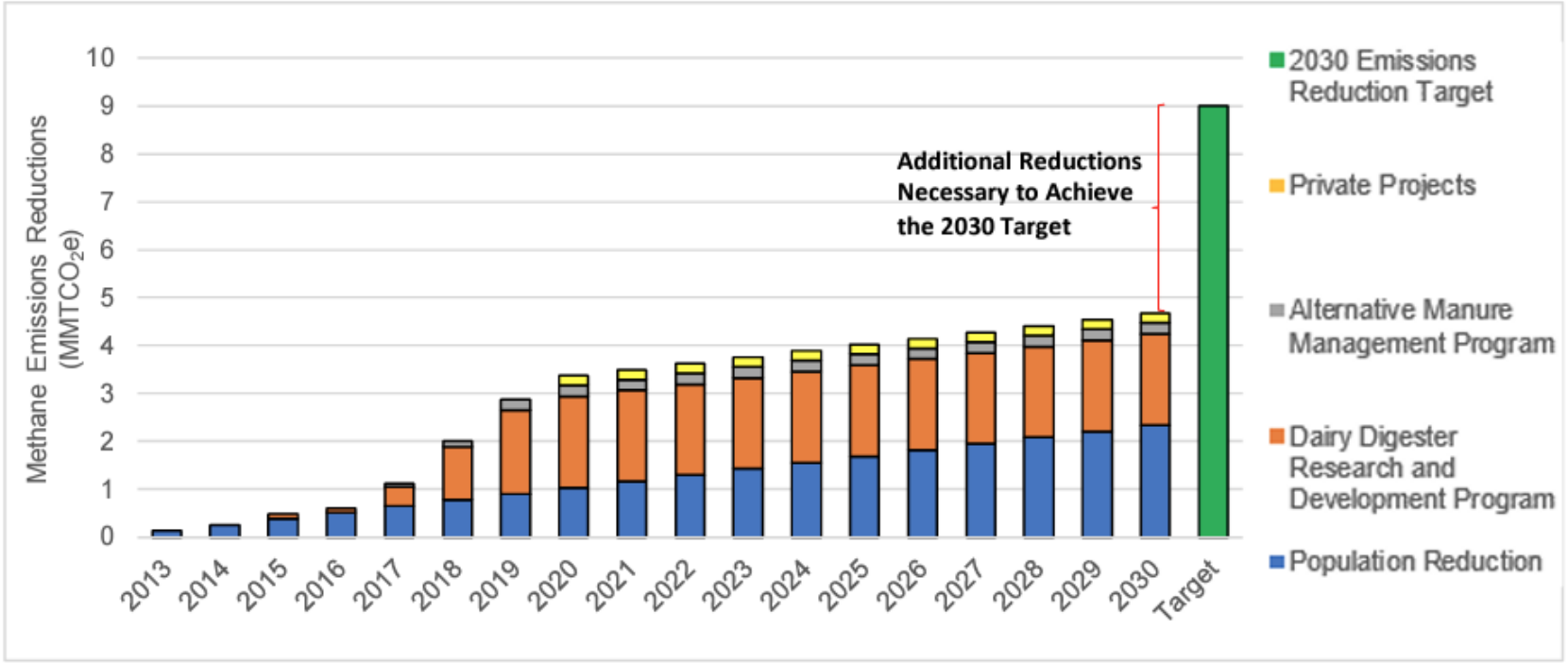
Human Methane Sources



Solutions: Agriculture

1. **Enteric:** Improved nutrition, feed supplements
2. **Manure:** Dairy digesters, liquid separation, non-lagoon storage methods
3. **Rice:** Water and fertilizer management, improved rice breeds

Dairy Sector Progress Gap



Solutions: Waste

1. **Landfills:** Organics diversion, gas capture, anaerobic digesters, biocovers
2. **Wastewater:** Gas capture, anaerobic digesters, aerobic treatment

Waste Sector Capacity Gap

Technology	Estimated Anticipated Capacity, 2025*	Estimated Needed Capacity, 2025	Difference
Compost	5.3	9.6	(4.3)
Anaerobic Digestion	1.0	2.7	(1.7)
Co-Digestion†	0.21	2.4	(2.2)
Chipping and Grinding	3.5	3.3	0.2
Total	10.0	18.0	(8.0)

Solutions: Oil and Gas

1. **Operational wells:** Monitoring & intervention
2. **Spent wells:** Capping & plugging
3. **Refinery operations and pipelines:** monitoring hundreds of potential leaks, updating equipment and engineering

LCFS: 20 year equivelancy vs. 100 year
Don’t use EPA pre-set methane leak estimates!

Thank you.

Ken Alex, Project Climate
ken.alex@berkeley.edu

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