PETITION TO THE AIR RESOURCES BOARD: REGULATE LIVESTOCK METHANE EMISSIONS

Daniel Chandler, Ph.D.
Will Brieger, attorney

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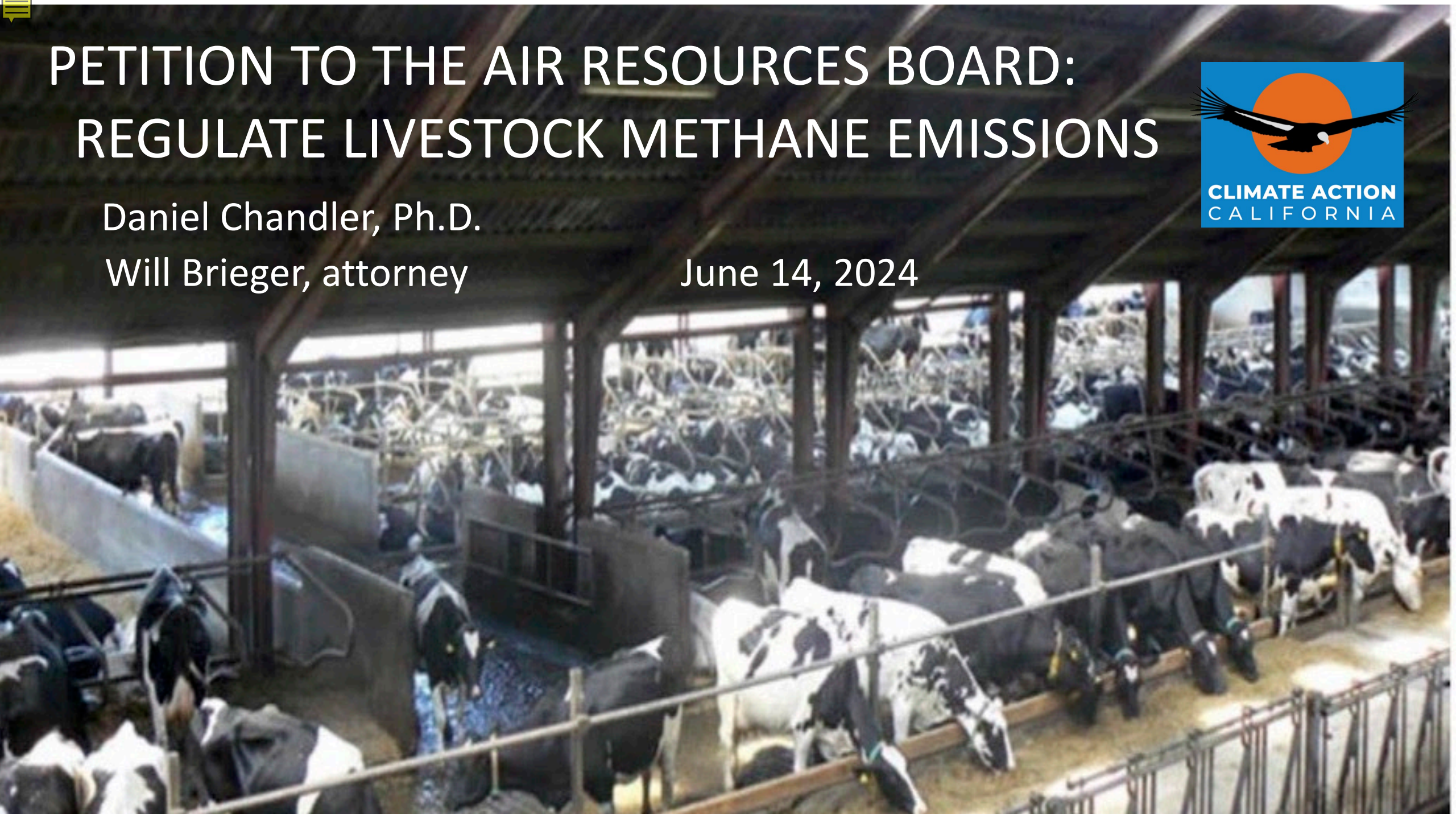

The urgency of reducing methane

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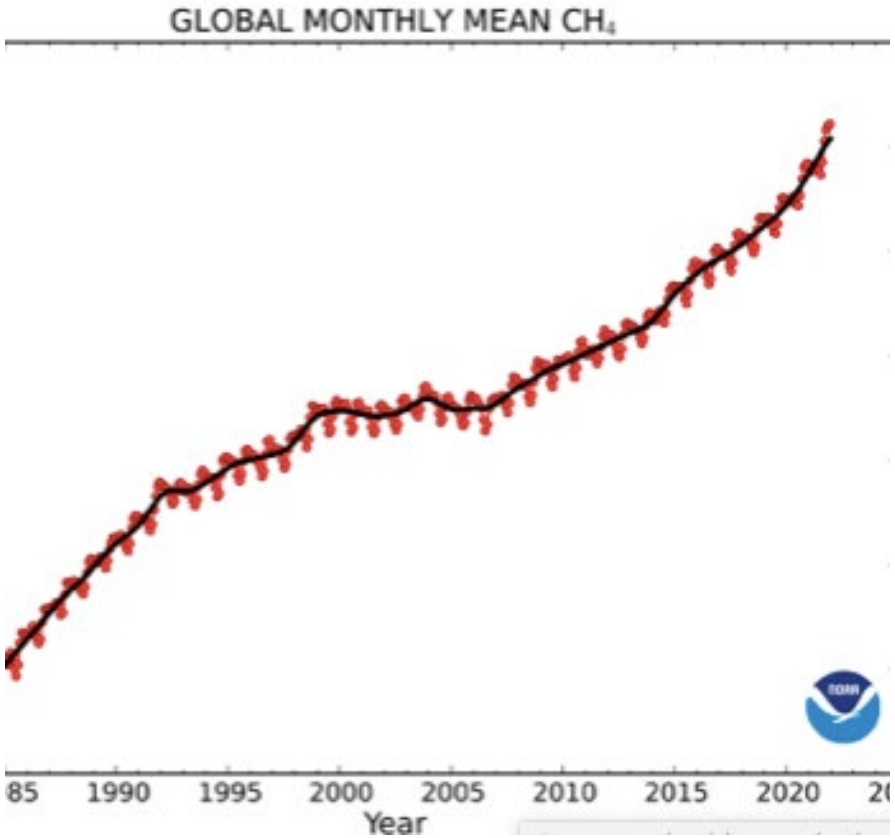
Reducing methane slows warming quickly, giving us time to reduce CO_2

- Methane causes 30% of warming.
- Over 20 years, methane causes 80 times more warming than CO_2
- It is short-lived
- Still increasing rapidly



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California's problem with dairies and methane

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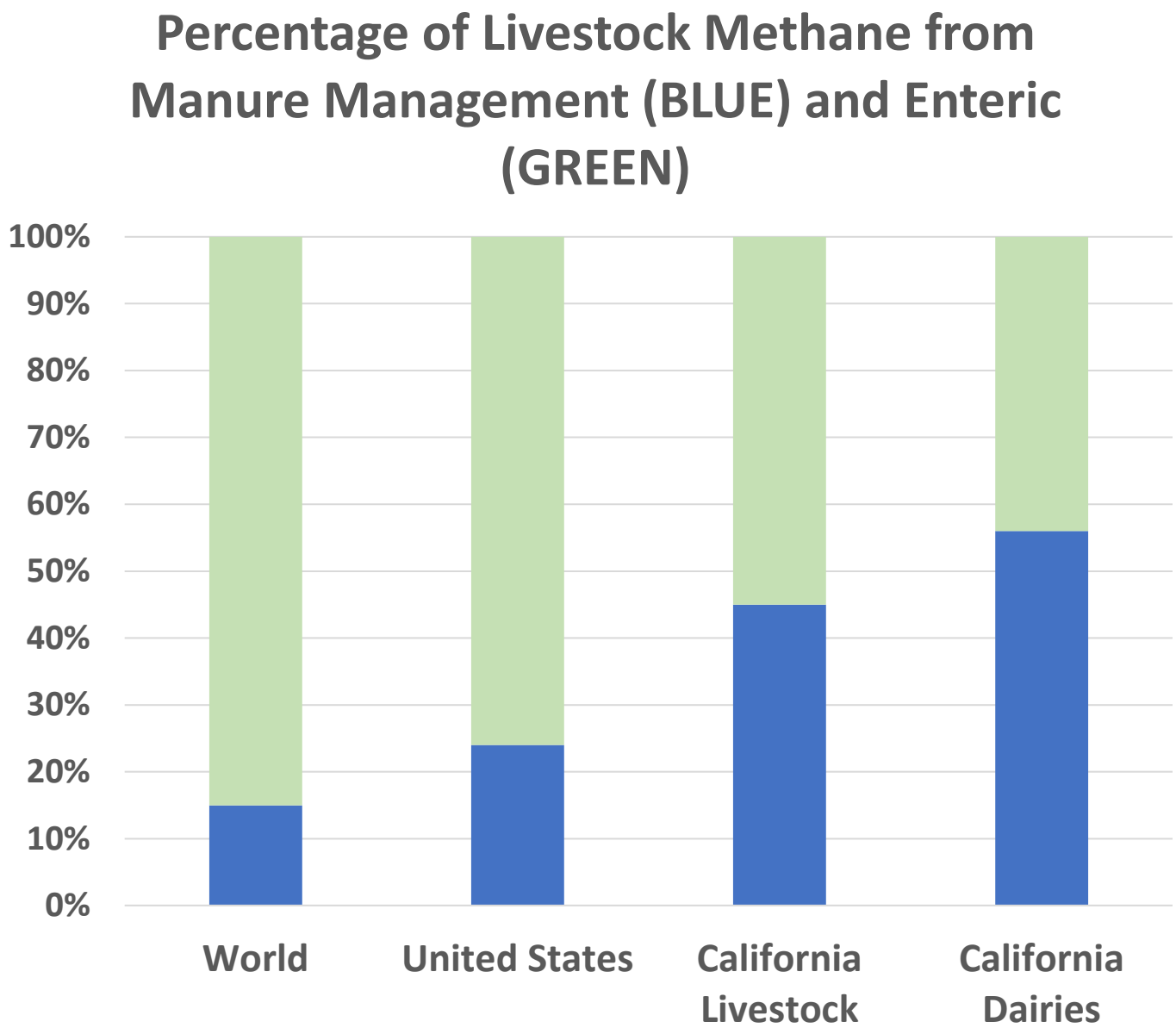
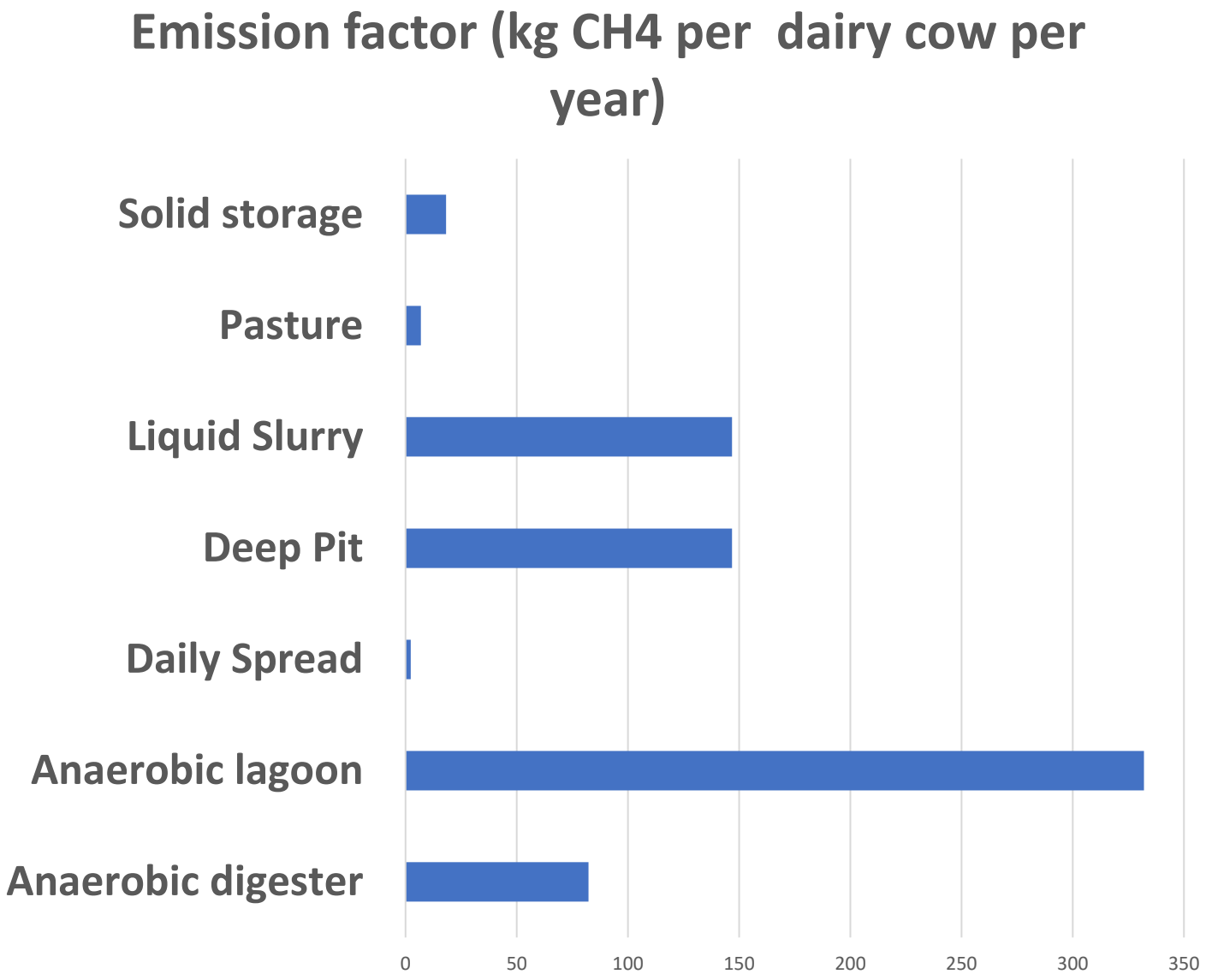
Enteric fermentation (burps) is similar for each cow. Methane emissions from manure varies widely.



Non-enteric methane emissions largely result from manure management methods



There are multiple methods that can reduce methane emissions from manure

California relies primarily on capturing methane in dairy digesters.

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But there are a number of alternative manure management methods. Two Examples:

Solids Separation

Vermifiltration

SB 1383 from 2016 requires us to reduce livestock and dairy methane by 40% in 2030.

GOAL

Reduce dairy and livestock methane emissions by 9 MMT CO_2e.

STATUS

NOT ON TRACK

CARB claims we are on pace to cut 5.0 MMT CO_2e by end of 2026.

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Is CARB's incentives-based strategy plausible? First issue: Is it based on solid data?

- California Emissions Inventory does not match numbers in the Denial of our petition
- CARB is counting new projects; losses are uncounted
- Research shows CARB undercounts methane emissions
- Even if every dairy farm had a digester, only 25% of farm-based methane would be reduced.

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Why should CARB use its regulatory power?

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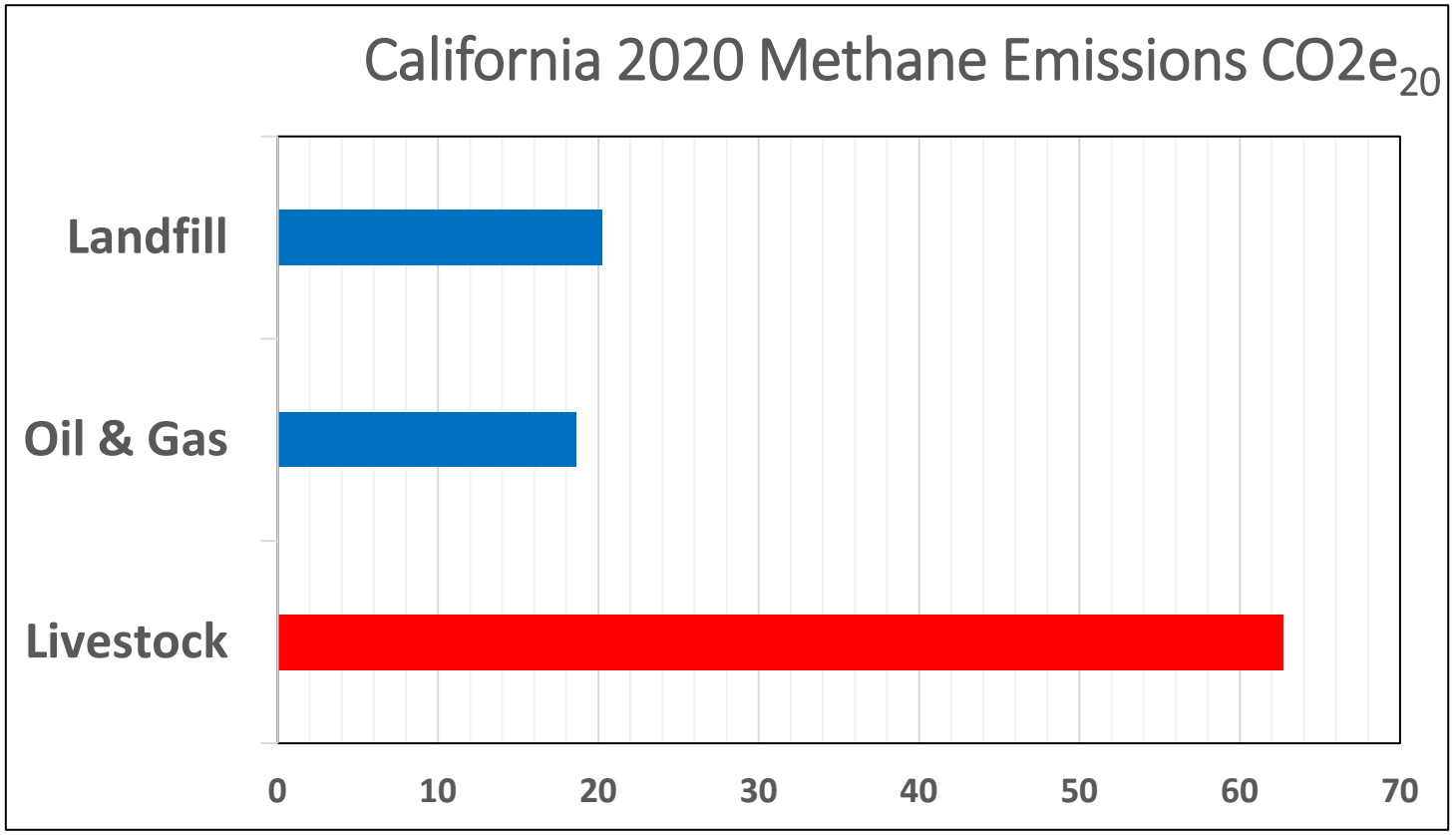
California regulates oil/gas facilities and landfills.

Dairy and livestock emit three times the methane but are *not regulated.*



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It's the law:
SB 1383 (2016) requires a 40% reduction in livestock methane by 2030

- Baseline year 2013 was near-peak emissions
- Prioritized incentives
- Regulations could be adopted promptly, effective as soon as 2024
- Regulation of enteric methane has more conditions
- *No regulations have been workshopped or adopted*

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Dairies are a social justice issue

The San Joaquin Valley is one of the most polluted regions in the United States.

- **Methane** contributes to the formation of ground-level ozone
- Dairies contribute 21% of the **ozone** in the SJV.
- Excess nitrogen, in the form of **ammonia**, is the source of much of the air and water pollution in the SJV.
- **Ammonia** as a gas contributes to generation of **PM2.5**; pollutes ground water and surface water; and contributes to **N_2O** emissions.
- **Hydrogen sulfide** causes noxious odors and is dangerous to health.
- ***Regulating manure management must form the backbone of attempts to address these problems.***

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Regulation eliminates "Avoided Emissions" distortions in the Low Carbon Fuel Standard

- In the absence of regulation, "avoided emissions" is voluntarily captured methane
- Captured digester methane capture is over-valued by the LCFS…
- …which encourages biomethane internal combustion vehicles when we need EVs
- Avoided emissions crediting produces added profits for the largest dairies, supporting industry concentration

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First step: Measure and report farm-level emissions

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CARB has Full authority to measure and monitor livestock methane

SB 1383: “Nothing in this section shall limit the authority of the state board to acquire planning and baseline information, including requiring the monitoring and reporting of emissions.”

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Quoting EJAC consultant Prof. Michael Wara

Key Finding: ARB urgently needs to improve methane emission measurements

- Evaluate progress toward reduction goals
- Are reductions promised by grant recipients real?
- Need farm level data about herd size and manure handling
- Bring regulatory options into focus

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WE ASK CARB TO STEP UP AND REGULATE METHANE

FOR MORE INFORMATION CONTACT:
Dan Chandler: dwchandler@gmail.com
Will Brieger: will.brieger@gmail.com

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