MAZE ENVIRONMENTAL

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WHO ARE WE?

MAZE Environmental's system costs less, reduces emissions, and yields more oil in the tank than traditional systems.

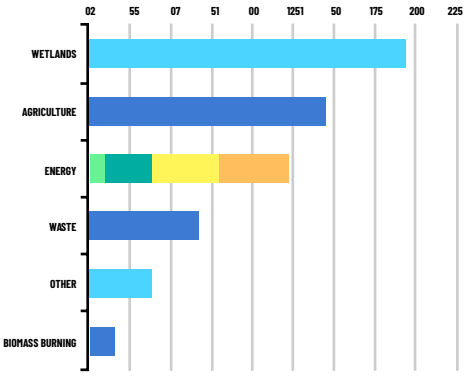
STABILIZERS

TOWERS

VAPOR RECOVERY UNITS

PUMP SYSTEMS

INSTALLATION TEAMS



***SOURCES OF METHANE EMISSIONS*

How does methane work in the atmosphere and why is even a 20-year global warming potential inadequate to capture what's actually going on in terms of warming?

Methane is 120 times more powerful than CO2 in warming the planet as soon as it's emitted. The scientific curve of methane's climate warming capacity, or climate forcing, begins at 120 more than CO2. The curve then dips down over time as methane chemically breaks down and transforms. But the lifetime of the methane molecule is only about 12 years. Decades out, most of the methane emitted eventually converts into CO2.

Here's an easy way to picture the warming power of methane.

If carbon dioxide is one blanket wrapped around the planet, methane, as soon as it's emitted, piles on 120 blankets that warm the Earth. Imagine being in your bed with 120 blankets on top of you, bearing the intense heat that builds up.

Even as methane nears the end of its life in a decade, it's still 100 times more warming than CO2.

In addition to oil and gas production, processing, and shipping, methane is also emitted by landfills and livestock operations. Climate solutions rest on avoiding methane emissions from these sources. Today, we do not have a sensible policy construct for both avoiding methane in the short term and managing CO2 in the long-term. Instead, current climate policy making efforts are challenged by trying to simultaneously avoid and mitigate different emissions with different potency over different time frames. This makes conventional 100 and 20-year GWPs inadequate to capture what's actually going on in terms of warming.

What kind of progress has been made lately in terms of measuring methane emissions, either from point sources or in aggregate?

Tracking methane as closely as it deserves has not been a high priority until now. Yet at the same time, it's getting harder to track methane as the world globalizes. Take the oil and gas sector, for example. Gas used to be a regional fuel shipped domestically by pipelines. As gas trade expands globally, leakage increases along lengthening supply chains. To be zero-emitting, methane must be fully contained everywhere—pumping it out of the ground, gathering and boosting it through pipelines, liquefying and loading it into ocean-going tankers, re-gasifying it and pressurizing it back into pipelines, and using it in various commercial applications and residential appliances.

Instead of spanning 1,000 miles, now a typical gas molecule can traverse 7,500 miles or more. The potential to leak is intensifying. Quickly spotting and plugging point sources is critical to avoid runaway emissions in the aggregate.

Methane is a tiny molecule under high pressure. This complicates progress to keep it carefully contained. Basically, methane wants to escape. It leaks constantly from normal operations and intermittently and in large volumes due to poor maintenance and accidents.

Methane leakage also presents risks beyond climate change. In addition to causing fires and explosions, methane impacts environmental justice. While natural gas is upwards of 90% methane, it also contains carcinogens and air toxics like benzene, toluene, and xylene.

So, preventing methane emissions has public health co-benefits, especially in highly industrialized areas surrounded by workers and low-income residents.

Taken together, the climate, safety, and public health imperatives to tightly manage methane merit improved emissions visibility, attribution, policy oversight, and market activation.

The Methane Moment: An Interview with Debbie Gordon
July 14, 2021 | By Christian Roselund

Brooks Pearce, CEO
Matt Flanagan, COO
Sherif Dweek, President-International
Alex Duka Senior Financial Advisor

www.MazeEnvironmental.com
(512) 402-2683
info@mazeenviro.com
media@mazeenviro.com