

Attention: Art. 6.4 Supervisory Body
To whom it may concern:

As I write this note on July 3rd, 2023 I'm reminded via breaking news that the "Earth has just experienced the hottest day we have ever seen" (in modern record-keeping). Hopefully motivating our level of urgency. And reinforcing the importance of a broad approach to "removal activities" as promoted by the CO2BC's 2nd point from their July 3, 2023 Call for Input submission - speaking to a "method-neutral and criteria-based definition of removal activities...". Humanity needs an all hands on deck approach.
<https://www.msn.com/en-us/weather/topstories/earth-has-just-experienced-the-hottest-day-we-have-ever-seen/ar-AA1dq1N7?ocid=msedgntp&cvid=0e55f267ca424661a33cb7d9f220bb76&ei=11>

I wanted to share a few words regarding any potential Article 6.4 SB decision on whether to include atmospheric methane removal as an approved "removal activity" within this mechanism, consistent with a Call for Input on A6.4-SB006-AA-A08, annex 8, "Requirements for the development and assessment of mechanism methodologies" (Draft v04.0). I appreciate your indulgence in this loose-form commentary.

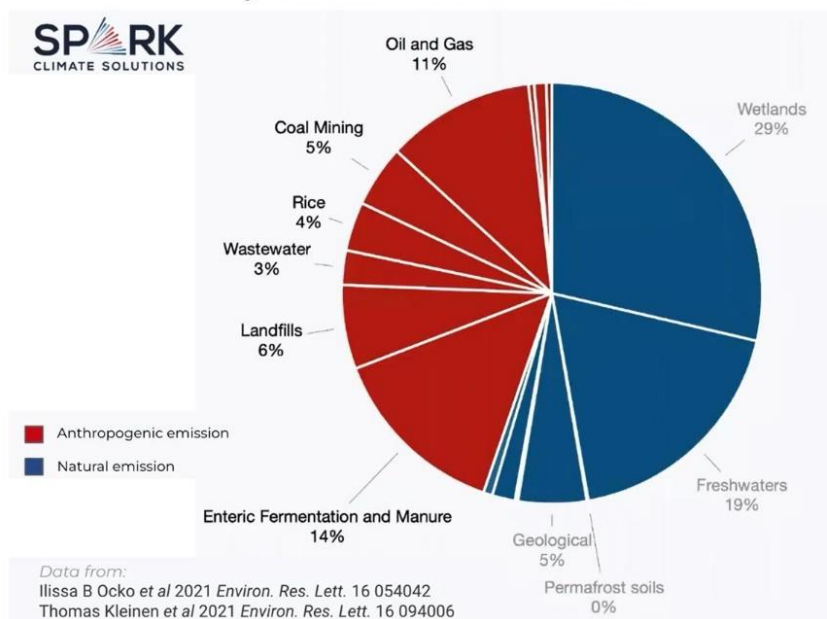
Recognitions

Most of us struggle to properly understand methane but we need to embrace these facts:

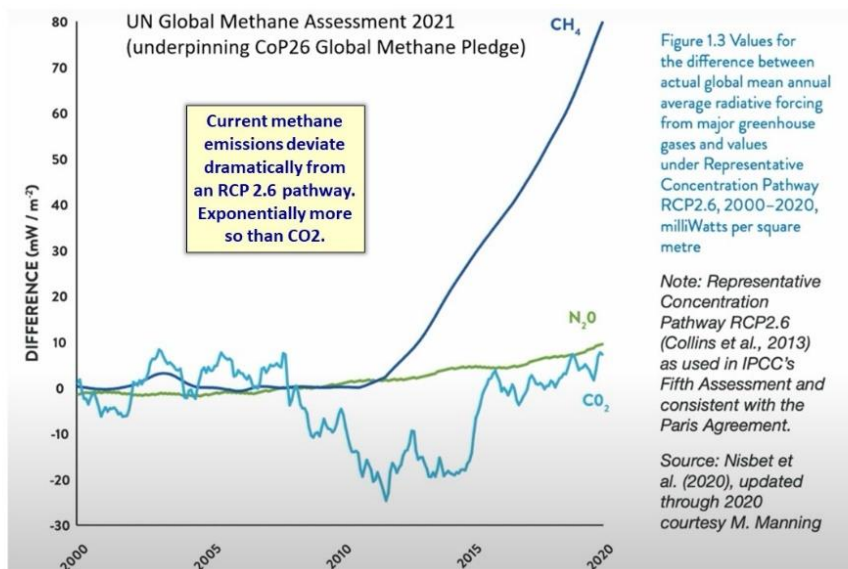
- A methane molecule does not warm the atmosphere for 100 years (CO₂-e).
 - A methane molecule only warms the atmosphere for roughly 10 years.
 - During those 10 years it warms over 105X more than a CO₂ molecule.
- Methane is now growing faster in our atmosphere than CO₂.
 - Meaning its %'age of overall warming is growing.
 - Driven by accelerating natural emissions since 2007.
 - Which will continue growing since warming is built-in for decades.
- Cumulative CO₂ still warms earth more but CH₄ is catching up & risks self-reinforcing.

Natural methane emission are widely distributed geographically, rapidly growing (beyond initial IPCC projections) and overtaking anthropogenic emissions as the majority of overall CH₄ induced warming.

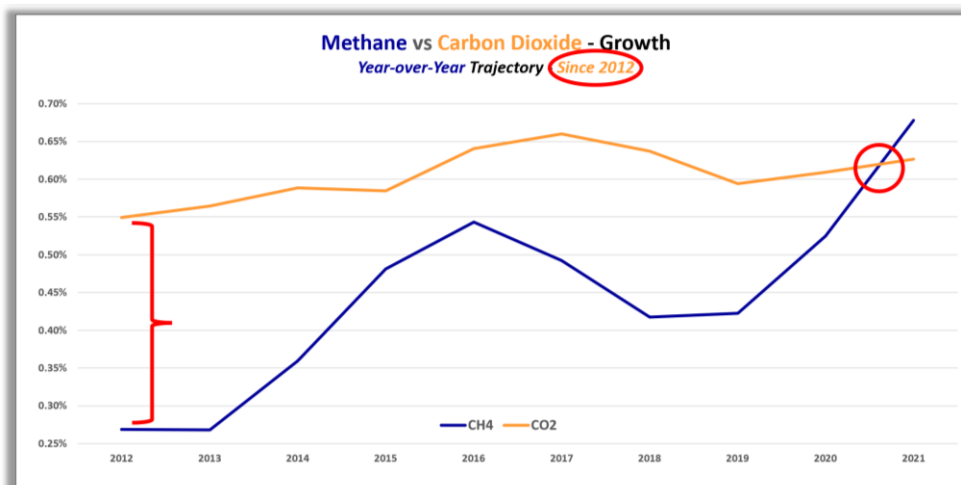
Projected 2030 methane emissions



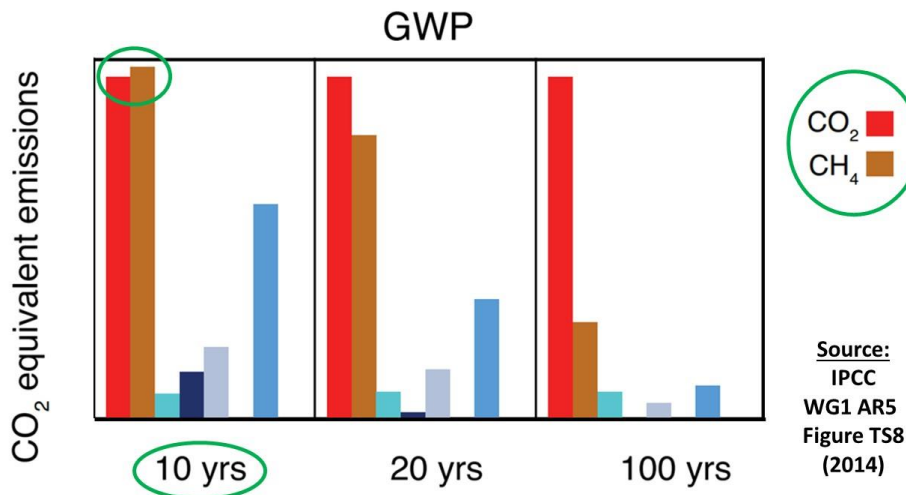
This rapid acceleration of methane emissions has been unanticipated by the IPCC. During Professor Euan Nisbet's comments to the UK Greenhouse Gas Removal event in 2022 discussing the below graph, he said "...look what methane is doing. That was **completely unexpected when the Paris Agreement was signed**. ...What's driving this is a big change which you can track in the carbon isotopes. For 200 years the carbon isotopes in atmospheric methane were tracking towards heavier, more Carbon¹³. That turned around in 2007. Since then it's been getting lighter. In other words, more Carbon¹². Which is **probably caused by biological sources**. And those biological sources **include natural wetlands – in other words warming feeding warming.**"



We're effectively poking an "earth-systems-bear" with a stick and the bear is starting to wake up by belching methane. CH₄ emissions are growing faster than CO₂ emissions for the first time in 30 years - representing a larger and larger %age of new and overall radiative forcing (per NOAA data).



The below IPCC Chart makes clear a 1-year pulse of CH₄ actually warms the planet more than a 1-year pulse of CO₂ (pre-2014). As we approach a decade later, with CH₄ growth outstripping CO₂ growth over that timeframe, the result is tilted even further toward more warming from methane as we look to the future:



Observations

Given current NDC's and the timing of netzero pledges (2050 for the US, 2060 for China) global temperatures will continue accelerating for at least decades to come. In that world, without a targeted mitigation strategy, natural methane emissions will only increase. I've produced analysis suggesting anthropogenic methane reductions will be insufficient to meet the Paris Agreement objective of remaining well below 2C. **Atmospheric methane removal (or destruction) is now required if we're to remain within a Paris Agreement trajectory.** Which suggests excluding atmospheric methane removal from the Article 6.4 mechanism is a missed opportunity. Disincentivizing research and commercialization efforts into this activity is a potentially significant mistake with long-term and important ramifications.

In conclusion, there's much less methane in our atmosphere than there is CO₂ (600 million tonnes vs 37 billion tonnes). So if we can figure out how to attack it, we should be able to scale methane removal faster than CO₂ because we'll be handling 62X less "stuff".

As such, methane removal has the unique ability to cool the planet in the short term. It's potentially humanity's best & most socially acceptable lever to mitigate warming relatively quickly. Scientifically viable pathways are emerging and need to be supported. Determining if there's a rapidly deployable atmospheric removal process for CH₄ should be one of humanity's highest priorities – and it should be included as an approved "removal activity" within the context of Article 6.4. Remember:

Decision 3/CMA.3

Section 5: ...requests the Supervisory Body to:

- (a) Develop... provisions... (for) delivering overall mitigation in global emissions...
- (b) In the context of developing and approving **new methodologies** for the mechanism...

Section 6: ...requests the Supervisory Body to... develop... recommendations, for consideration ...on:

- (c) Activities involving removals... **in addition to** the activities referred to in chapter V of the annex (Article 6, paragraph 4, activity cycle);

Section 7: ...requests the Subsidiary Body for ...advice to develop... recommendations... on:

- (g) The processes ...for the **delivery of overall mitigation in global emissions...**

Section 11: ...requests the Subsidiary Body for ...advice to develop recommendations with respect to...

- (b) Consideration of **any need for further safeguards;**