



# HYDROGEN

More than 99% of hydrogen is produced from fossil fuels. Hydrogen production is responsible for huge amounts of greenhouse gas emissions, particularly due to the release of fugitive methane—80 times more harmful than CO<sub>2</sub>. Blue hydrogen (from gas, with CCS) emissions are 20% greater than directly burning natural gas or coal for heat, and 60% greater than burning diesel oil for heat. It also relies on and encourages the unproven and risky technology of CCS (another false solution). Green hydrogen (from renewable electricity) production is highly inefficient, requiring huge amounts of both cheap renewable electricity and fresh water. Hydrogen-based electricity generation is more costly than solar + wind + battery storage. The hydrogen hype is created and fed by the fossil industry wanting yet another lifeline to keep on emitting (especially fossil gas in the case of hydrogen). In Europe, this hydrogen hype also further enables extractivist and neocolonial dynamics with most hydrogen production being planned across Africa to feed the European frenzy

## RELEVANCE FOR BONN/ COP28:

- This will likely surface in discussions on energy transition
- May also be alluded through EU's post-COVID-19 economic recovery package

## HERE ARE SOME THINGS YOU MIGHT HEAR THAT ARE FALSE:

- “Hydrogen can electrify long distance travels and heavy industries”
- “Blue hydrogen can be harnessed from natural gas, cushioned with CCS”
- Hydrogen is a clean energy source that must be part of the transition

## HERE'S HOW TO RESPOND:

1. Narratives on the potential of hydrogen are often bloated. There is still very limited scientific evidence.
2. Hydrogen is not clean. Only 1% of the current hydrogen production is derived from clean energy sources, and even that 1% of so called green hydrogen is linked to extractivist projects that create tension around land and water, especially in Africa (to feed Europe's hydrogen frenzy).
3. Green hydrogen cannot be rolled out at scale to be a big part of the transition because it requires huge amounts of constant, cheap renewable energy and freshwater, rendering it highly inefficient and economically unviable.
4. Hydrogen is highly likely to leak during production or transport, causing more GHG emissions.
5. CCS is still unproven and pose its own environmental risks. Fossil industries are hyping blue hydrogen from gas, claiming to have the technology to capture 80-90% of CO<sub>2</sub>. Studies so far point to less than 12%. This is a mere attempt at delaying the phase out of fossil fuels
6. One thing is certain: the IPCC says we can't afford to tinker around the edges, fossil fuels must be phased out in the near-term to limit global warming.

## Important Links

- [The Hydrogen Hype: Gas Industry Fairy Tale or Climate Horror Story?](#), Corporate Europe Observatory, Food and Water Action Europe, ReCommon, December 2020
- [Hydrogen Factsheet](#), Friends of the Earth Scotland, November 2021
- [The illusion of green hydrogen](#), ReCommon, November 2022
- [Hydrogen Hype - Pay no attention to the polluter behind the curtain](#), Friends of the Earth US, February 2023
- Green hydrogen - solution or pipe dream? [Part I](#) and [Part II](#), Energy Transition, April 2023