



Germany's great hydrogen race

The corporate perpetuation of fossil fuels, energy colonialism and climate disaster



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Executive summary

For years, Germany has hyped hydrogen as the centrepiece of a climate-neutral economy and the EU has welcomed this alleged 'miracle gas' with open arms. Germany's influential role in setting the EU's agenda has contributed to hydrogen being now at the core of EU climate and industrial policies, and Brussels plans to spend billions in public subsidies to spur Europe's hydrogen sector.

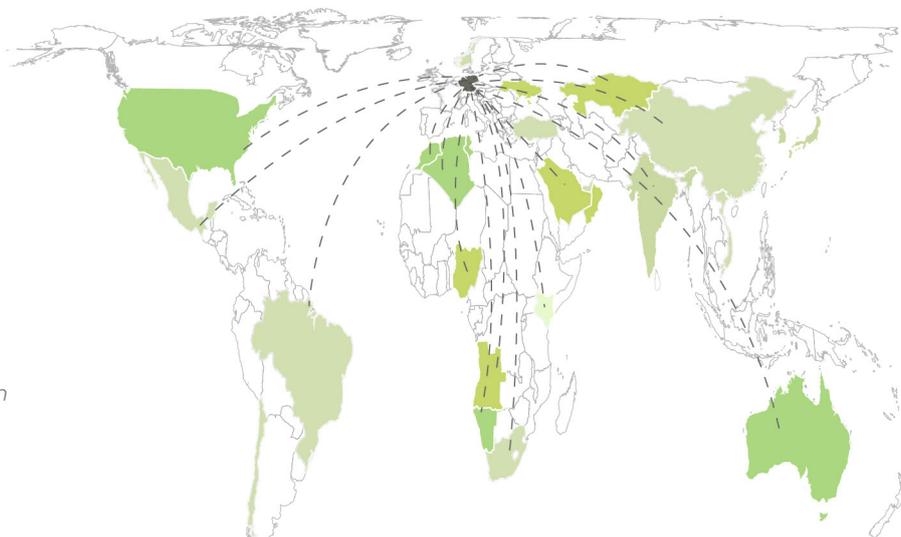
This hype ignores several dirty facts. First, 99 per cent of today's globally produced hydrogen is 'grey' hydrogen made from fossil fuels, with annual CO₂ emissions exceeding those of the entire country of Germany. Second, fossil-based 'blue' hydrogen, which is being promoted as a 'low-carbon' alternative, has a climate footprint that is nearly as bad when its total emissions are taken into account. Finally, even 'green' hydrogen, which is considered 'carbon free' but accounted for only 0.04 per cent of global hydrogen production in 2021, comes with serious challenges and risks. It is energy inefficient, behaves as a potent indirect greenhouse gas, and production on a large scale requires vast amounts of land, water and renewable energy. Its production can fuel 'green grabbing' – the appropriation of land and resources for environmental ends. An inflated demand for hydrogen is also being used as a Trojan horse to prolong the use of fossil fuels.

More and more experts are thus warning that an energy economy focused on hydrogen will actually increase emissions. The German Advisory Council on the Environment, for example, an expert advisory body of the German government, has stated that hydrogen "cannot play an overarching role" in solving the climate crisis.

Why then does hydrogen enjoy such a privileged position in German and EU politics today? Who is driving the German hydrogen craze, and who is benefitting from it? And what are the likely impacts for prospective green hydrogen export countries? These are the questions addressed in this report.

GERMANY'S GLOBAL HYDROGEN QUEST

- Hydrogen alliances:
Algeria, Australia, Canada, Morocco, Namibia, Tunisia
- Hydrogen diplomacy offices and dialogues:
Angola, Nigeria, Saudi Arabia, Ukraine, Kazakhstan, Oman
- Energy partnerships and dialogues with hydrogen as a priority:
Brazil, Chile, China, India, Japan, Korea, Mexico, Norway, Qatar, South Africa, Turkey, United Arab Emirates, Vietnam
- Bilateral climate and development partnerships with hydrogen as a priority:
Kenya



Key findings

- **Behind Germany's hydrogen dash lies a broad network of companies, industry associations and consultancies.** More than 100 German businesses have been identified as key players along the value chain for green hydrogen. Many of them are from or have ties to the fossil fuel and other polluting industries, and they are jumping on the hydrogen bandwagon to lock in harmful infrastructure as well as production and consumption models.
- **Germany's hydrogen lobby employs hundreds of lobbyists and spends millions on influencing German politics.** Chemical giant BASF, for example, a large user and producer of fossil hydrogen, had a lobby budget of €3.8 million in 2021 and currently employs 24 lobbyists. Germany's largest energy lobby group BDEW, whose member companies are responsible for 90 percent of fossil gas sales in Germany and who are betting on hydrogen to stay in business, has 51 lobbyists and a lobby budget of €7.1 million in 2021. Such lobby power allows the hydrogen industry to follow and influence complex regulatory processes and to secure lobby meetings with key decision makers.
- **Like past German governments, the current coalition of Social Democrats, Greens and Liberals grants privileged access to the gas lobby,** a driving force behind the hydrogen hype. From December 2021 to September 2022, high-ranking government officials met with gas lobbyists on average once a day. These meetings included several behind-closed-door conversations about hydrogen with lobbyists from fossil fuel majors like RWE, Equinor and Wintershall Dea as well as engineering giants like Siemens Energy (which manufactures gas pipeline components and electrolyser plants to produce green hydrogen) and MAN Energy Solutions (a subsidiary of car behemoth Volkswagen, which produces electrolyser components and engines for the automobiles and ships that it plans to fuel with hydrogen).
- **The hydrogen lobby has co-drafted the German H2Global public funding scheme.** This scheme arose from the Business Alliance for Energy, an industry-only forum created by the German Ministry for Economic Development and Cooperation that paves the way for the early involvement of industry in the Ministry's hydrogen strategy. The Hydrogen and Fuel-Cell Association (DWV), an influential lobby group in the hydrogen sector, seems to have played a key role in drafting the concept for H2Global. The German government has allocated more than €4 billion (following an initial endowment of €900 million) to the funding scheme to spur green hydrogen exports to Germany.
- **The German government's main hydrogen advisory body, the National Hydrogen Council, is dominated by corporate lobbyists** who steer Germany's hydrogen policy in the interest of their profits. These 25 experts include representatives from 15 companies from across the hydrogen supply chain: gas company Linde, grid operator Open Grid Europe, car manufacturer Daimler Truck, chemicals producer Covestro, and so on. The two environmental NGOs on the Council can always be overruled, and global justice groups are completely absent from the body despite Germany's dependence on hydrogen imports.
- **Germany's recent shift to blue hydrogen has been one of the lobby's biggest wins.** Unlike Germany's 2020 hydrogen strategy, the updated version (which was being finalised at the time of writing), explicitly foresees the use and public funding of fossil-derived blue hydrogen. Projects to import blue hydrogen and its derivatives are already in the planning, for example with both Norway and the United Arab Emirates.

As its carbon balance can be worse than the 'traditional' burning of coal, oil and gas, the scaling up of blue hydrogen risks driving up emissions. Some experts warn that investments in blue hydrogen are worse than inaction on climate change, not least because they lock in the fossil fuel economy.

- **Germany has established hydrogen alliances and partnerships with at least 26 potential export countries, many of them in the Global South.** Berlin plans to cover two-thirds of its future green hydrogen demand with imports and is set to become Europe's biggest importer of the gas, with an estimated 60 to 70 per cent share of the future EU/UK import demand. German corporations are keen participants in this global quest, and accompany ministers whenever they go on hydrogen missions.
- **German-backed green hydrogen projects abroad follow colonial patterns.** Resources are appropriated while negative impacts like ecological damage and energy scarcity are conveniently outsourced. Conflicts over land and water use are already becoming apparent and could intensify over the next years. There are also concerns about the livelihoods of fishing communities as a result of mega ports and other export infrastructure, as well as pollution from the waste of the desalination plants that are needed to obtain water for green hydrogen production in arid regions.
- **A shocking example of human rights violations connected with green hydrogen projects is Saudi Arabia's planned megacity Neom,** where Thyssenkrupp will install a huge electrolyser to produce hydrogen for export. Ancient tribes have been forcibly evicted from their land to make way for Neom. Several protestors have been sentenced to death because of their resistance to the eviction, and one of them was shot dead by security forces in April 2020. Nonetheless, the 2021 German-Saudi Arabia hydrogen cooperation seeks to implement joint projects in Neom. Such cooperations risk the reproduction and legitimisation of authoritarian regimes in the name of sustainability.
- **Hydrogen projects in the Global South tend to be centralised mega projects and lack civic participation.** A mapping of 27 mostly African countries could not identify a single hydrogen project in which the community was consulted prior to the decision to proceed with the project. A small group of political and economic elite is likely to profit from these top-down processes.
- **While the German state-industrial complex has lobbied to delay the EU's sustainability criteria for green hydrogen, it has developed nice-sounding standards to create acceptance for green hydrogen projects abroad.** But these standards apply only to a few select sites, and they ignore key issues such as communities' prior and informed consent. Community organisers have criticised the prospect of green enclave projects that will not become an integral part of their economies due to the lack of local ownership.

This report concludes that the looming hydrogen colonialism in the EU and Germany fails to deliver on global justice and energy democracy concerns as much as it fails to deliver on its key promise: to help tackle the climate crisis. Instead, there is a real risk that the hydrogen race will delay action to structurally decarbonise the economy: for example, increasing the energy efficiency of buildings (rather than heating homes inefficiently with hydrogen), transitioning to agroecological farming (rather than just greening synthetic fertilisers) and reducing traffic (instead of wasting energy on hydrogen-powered cars).

It is time that social justice and climate movements stand up against project hydrogen and the damage it will likely cause to communities and the planet.

Access the complete information here:

www.corporateeurope.org/en/GermansGreatHydrogenRace