

Global Energy Transition
**Green hydrogen – support for
the just transition?**

Tilman Altenburg, Andreas Stamm und Rita Strohmaier
German Institute of Development and Sustainability (IDOS)



Bonn, 13 March 2023. As part of its international energy co-operation, Germany is committed to a “just transition”. This means that, particularly in low-income countries with energy deficits, the conversion of energy systems must not put poor social groups at a disadvantage. Major investments in green hydrogen from the Global South are currently in the pipeline. Are these investments compatible with the aim of achieving a just transition?

Green hydrogen will play an essential part in the energy transition. Energy-intensive processes that cannot be converted to run on electricity need hydrogen as fuel. Examples include aviation and shipping as well as the production of

steel, fertiliser and many chemical products. Green hydrogen is produced using renewable energy, and many countries in the Global South have the ideal conditions for this, particularly for wind and solar power. For this reason, energy-hungry industrial nations are entering into dozens of energy partnerships with potential hydrogen-exporting countries in Africa, the Middle East and Latin America. Germany is subsidising the market ramp-up through the H2Global Foundation, which purchases hydrogen using an auction system (via its subsidiary) and then auctions it off again throughout Europe. To cushion the financial risks involved in buying and reselling, the German government is making available the initial sum of EUR 900 million (which may be increased to as much as EUR 3.5 billion in the near future).

„High standards of justice need to be applied, particularly if investments in the Global South are subsidised with funds from the development cooperation budget. The energy transition will only be widely accepted if it is a socially responsible, i.e. a just, transition. This is possible, but it requires adapting the German approach to hydrogen policy.“

Investing in the hydrogen economy harbours major opportunities for the export regions, many of which are suffering from massive problems relating to structural change: hardly any industries that are internationally competitive, deficits in the balance of trade, unemployment and underemployment. Green hydrogen could boost local industry and create new jobs as result of the operation and, in some cases, manufacture of the equipment for solar and wind farms, electrolyzers, pipelines and desalination units and for the conversion of hydrogen into derivatives such as ammonia and methanol that can be transported more easily. In addition, hydrogen-producing countries can attract international investments in energy-intensive industries ranging from aluminium smelting and steelmaking through to the production of fertiliser and car parts. Existing national industries and transport systems can be decarbonised and thus made fit for the CO₂-free global economy of the future.

At the same time, however, the necessary infrastructure is highly capital- and technology-intensive and, with the exception of the construction phase, employs hardly any staff. The infrastructure mainly consists of large-scale facilities that are supplied on a turnkey basis by multinational companies. There is little opportunity to develop local supply industries. The volumes of investment are very large, which provides an incentive for opaque contracts similar to those often observed in oil and mining industries. If no countermeasures are taken, therefore, large hydrogen projects

could fall foul of the "resource curse" of the kind that we are familiar with from oil-exporting nations. Furthermore, projects are often located in tax-exempt industrial zones and can give rise to conflicts, for example if there are bottlenecks in the local electricity and water supply while the export-focused industrial project has reliable supplies from its own facilities.

The international dimension also presents problems. The European Union is planning to introduce an import tax for high-emission products from countries where emission tax levels are lower. If green hydrogen is imported from the Global South to accelerate decarbonisation in the Global North while industrial goods imported from the Global South are taxed because slower progress with decarbonisation is being made there, this opens up an additional justice gap.

From the perspective of the energy transition, it makes sense for Germany to subsidise moves towards an international hydrogen economy. However, high standards of justice need to be applied, particularly if investments in the Global South are subsidised with funds from the development cooperation budget. The energy transition will only be widely accepted if it is a socially responsible, i.e. a just, transition. This is possible, but it requires adapting the German approach to hydrogen policy:

- An export promotion bias must be avoided. Promotion of renewable energy projects in partner countries should prioritise local energy supply and decarbonization of the national economy. Hydrogen export projects must demonstrate that they can meet their energy and fresh water requirements from their own facilities and should ideally even produce a surplus that can be fed into local grids.
- The local added value must not be restricted to a temporary boost for the construction industry. Linkages with local suppliers need to be developed and regulations to this effect incorporated into tender documents.
- The less successful the plans for creating economic linkages and permanent new jobs are, the greater the focus on fiscal effects must be. The amount of tax generated through export projects must considerably outstrip public pre-investments infrastructure. Additional earnings should contribute to distributive justice – for example in the form of a citizen's income or a special fund for economically underdeveloped regions.
- When tenders are issued and contracts awarded, high standards of due diligence are needed, particularly with regard to contracts and investment risks.

These regulations should not be imposed only on private investors, because this could slow down the market ramp-up. When large investments are subsidised, however, it is also important to invest in the accompanying structural and social policy. Only a credible and just transition will ensure that the global energy transition gains widespread acceptance.