Agora Industry | Anna-Louisa-Karsch-Str. 2 | 10178 Berlin | Germany

Berlin, March 31, 2026

To the COP30 TAFF Secretariat:

Agora Industry's Contribution to the COP30 Presidency Roadmap for Transitioning Away from Fossil Fuels in a Just, Orderly and Equitable Manner

Please find below Agora Industry's contribution to the COP30 Presidency Roadmap for Transitioning Away from Fossil Fuels in a Just, Orderly and Equitable Manner.

Agora Industry is an independent think tank dedicated to developing scientifically sound and politically feasible strategies for achieving climate-neutral industry.

Please do not hesitate to contact us should you require any further information.
Contact person: Karina Marzano, Project Lead Trade and International Partnerships at Agora Industry – karina.marzano@agora-industrie.de

(a) What are the most critical barriers — whether physical, economic, financial, institutional, technological or social— preventing a transition away from fossil fuels?

The transition away from fossil fuels is constrained by a combination of deeply rooted structural, financial, and geopolitical barriers.

First, many economies remain highly dependent on fossil-fuel revenues, in some cases accounting for up to 80% of export earnings and public income. This creates significant **fiscal and political challenges**, as moving away from fossil fuels can threaten

Agora Industry
Agora Think Tanks gGmbH
Anna-Louisa-Karsch-Str. 2
10178 Berlin | Germany
info@agora-industrie.de
www.agora-industry.org

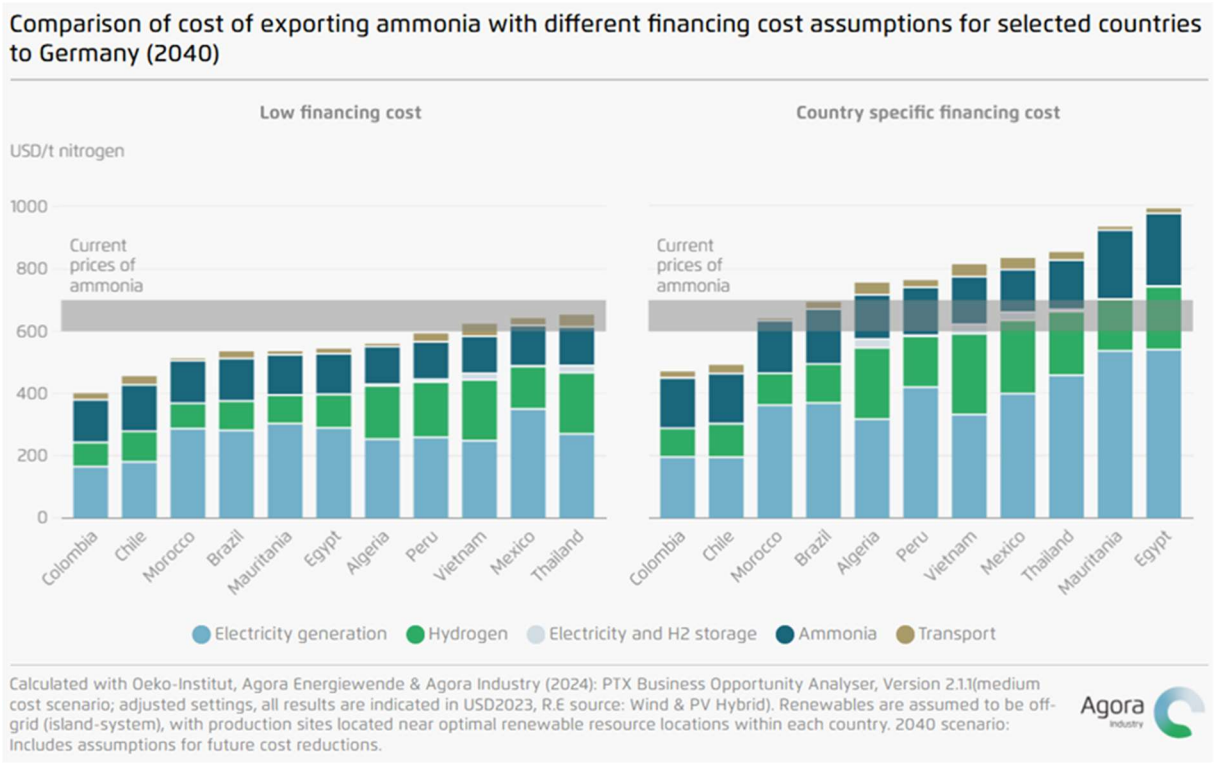
Managing Director:
Markus Steigenberger
Chair of Supervisory Board: R. Andreas Kraemer
District Court: Charlottenburg, HRB 126 115 B
Registered Office: Berlin | Germany
VAT ID: DE288357959

Bank Details:
National-Bank AG
IBAN: DE84 3602 0030 0003 8937 58
BIC: NBAGDE3E
EU Transparency Register: 321342621105-20
German Lobby Register: R003460

government budgets, economic stability, and employment. Without a **credible economic "offer" for a post-fossil-fuel future**, such as alternative production and export opportunities in green commodities like green ammonia or green iron, countries face strong disincentives to transition.

Second, **high costs of capital and limited access to finance** are major obstacles to investing in non-fossil alternatives, such as renewables or electrification, particularly in developing countries and emerging economies. Even where renewable resources are abundant, investment in green industries is often hindered by high perceived risks and expensive financing conditions. These risks are often caused by financing factors such as demand uncertainty, limited credible off-takers, and uncertainties in contractual and offtake arrangements. Political and regulatory factors like political instability, regulatory clarity, and permitting risks, as well as challenges in infrastructure further compound the issue. Since project viability is highly sensitive to the weighted average cost of capital (WACC), scaling up clean technologies depends heavily **on concessional finance, guarantees, and other de-risking instruments to attract investment**.

For instance, the figure below compares the projected cost of exporting renewable ammonia to Germany in 2040 across selected countries under two financing assumptions: low financing costs (with 4.6% of WACC applied to all countries) and country-specific financing conditions. With low financing costs, export costs in most countries fall within or below the range of current (fossil-based) ammonia prices, indicating that green ammonia could become cost-competitive in international markets. When country-specific financing costs are applied, total export costs increase substantially in several locations, highlighting the strong influence of capital costs on project economics. Overall, the findings highlight that **access to low-cost renewable energy and affordable financing will be critical to enabling competitive green ammonia supply and unlocking its role in future food and energy systems**.



Third, **geopolitical dynamics and short-term market incentives** can delay the transition. Periods of crisis or instability such as the ongoing war in Iran may encourage countries to expand fossil fuel production to capture windfall revenues, reinforcing dependence and diverting attention from **long-term decarbonisation strategies**.

Finally, the **persistence of fossil-fuel-based inputs in global supply chains**, such as natural gas-based fertilisers, creates additional lock-in effects. This dependence not only slows the transition but also exposes countries to geopolitical and food security risks. **Strengthening international cooperation to develop markets for green alternatives**, such as green fertilisers, could help reduce these vulnerabilities while supporting the emergence of new, sustainable industries.

(b) What potential levers, whether economic, financial, institutional, social or technological, exist for accelerating the implementation of the transitioning away commitment?

Agora Industry
Agora Think Tanks gGmbH
Anna-Louisa-Karsch-Str. 2
10178 Berlin | Germany
info@agora-industrie.de
www.agora-industry.org

Managing Director:
Markus Steigenberger
Chair of Supervisory Board: R. Andreas Kraemer
District Court: Charlottenburg, HRB 126 115 B
Registered Office: Berlin | Germany
VAT ID: DE288357959

Bank Details:
National-Bank AG
IBAN: DE84 3602 0030 0003 8937 58
BIC: NBAGDE3E
EU Transparency Register: 321342621105-20
German Lobby Register: R003460

A key lever for accelerating the implementation of the "transitioning away" commitment lies in building coordinated international mechanisms that address economic, financial, and technological barriers simultaneously.

One promising approach is to create a global platform for de-risking and partnership in green commodities — a **Green Commodities Hub**. Such a platform would combine concessional and blended finance, guarantees, and risk-sharing instruments with technology transfer to unlock investment in green industries such as green ammonia and green iron[1]. By providing stable demand signals through international procurement frameworks and coordinated policy support, they can make low-carbon projects bankable and accelerate industrial transformation.

Institutionally, this hub would rely on collaboration between governments, multilateral development banks, and industry. Governments can set policy frameworks, standards, and co-financing mechanisms; MDBs and international financial institutions can provide concessional capital and risk mitigation tools; while industry and technology providers drive project development, deployment, and innovation. Building on existing country level initiatives, such as UNIDO's industrial decarbonisation hubs[2] and the Climate Investment Funds (CIF) industry program[3], can further speed up implementation without creating additional bureaucratic complexity.

Economically, such a platform would help reduce dependence on fossil fuels by enabling diversification into competitive green export sectors, while also strengthening supply security and supporting climate diplomacy. Over time, scaling these efforts through harmonised standards, expanded financing, and broader technology diffusion can lead to mature global markets for green commodities and sustained industrial decarbonisation.

[1] For a detailed analysis of how countries with strong renewable energy potential and iron ore reserves can produce and export green iron, see: https://www.agora-industry.org/publications/the-role-of-green-iron-trade-in-accelerating-steel-transformation

[2] https://decarbonization.unido.org/solutions/industrial-decarbonization-hubs/

[3] https://www.cif.org/industry-decarbonization

Agora Industry
Agora Think Tanks gGmbH
Anna-Louisa-Karsch-Str. 2
10178 Berlin | Germany
info@agora-industrie.de
www.agora-industry.org

Managing Director:
Markus Steigenberger
Chair of Supervisory Board: R. Andreas Kraemer
District Court: Charlottenburg, HRB 126 115 B
Registered Office: Berlin | Germany
VAT ID: DE288357959

Bank Details:
National-Bank AG
IBAN: DE84 3602 0030 0003 8937 58
BIC: NBAGDE3E
EU Transparency Register: 321342621105-20
German Lobby Register: R003460

Finally, embedding social and institutional safeguards, such as inclusive access to jobs, skills, and finance, as well as protections for labour rights, ensures that the transition is not only faster, but also equitable and politically sustainable.

(c) What country, regional or sector roadmap experiences, best practices, and lessons learned can be shared?

Several emerging roadmaps (including Brazil's *Mapa do Caminho para o fim dos combustíveis fósseis*[4]), alongside other platforms and initiatives, offer valuable best practices and lessons for accelerating the transition away from fossil fuels, particularly where they integrate industrial policy, climate finance, and international cooperation. To be effective, however, such roadmaps must also be backed by binding regulation and legislation that can translate ambition into real-world investment.

A Green Commodities Hub such as the global green commodity de-risking & partnership platform proposed above should **leverage and scale existing country-led and multilateral platforms rather than creating new structures**. For example, initiatives led by UNIDO and CIF mentioned above demonstrate how technical assistance, investment preparation, and multi-stakeholder coordination can be effectively combined at country level. These models show that coordinated public–private engagement is critical to turning climate ambition into bankable projects.

Moreover, a Green Commodities Hub could **integrate with and reinforce the emerging Plans for Accelerating Solutions (PAS) under the COP Action Agenda**[5], as it operates at the intersection of three central COP priorities: transitioning away from fossil fuels, industrial decarbonisation, and climate finance reform.

Examples of a PAS delivery mechanism is the Global Clean Hydrogen Programme (Global Environment Facility + UNIDO)[6] intended to accelerate hydrogen production and uptake in countries like Algeria, Ecuador, Egypt, Malaysia, Namibia, Nigeria, Pakistan, the Philippines and South Africa.

[4] https://oc.eco.br/lula-determina-que-brasil-faca-roteiro-para-saida-dos-fosseis/
[5] https://climateaction.unfccc.int/CopsAndSummits/COP30
[6] https://www.unido.org/solutions/global-programme-hydrogen-industry

Agora Industry
Agora Think Tanks gGmbH
Anna-Louisa-Karsch-Str. 2
10178 Berlin | Germany
info@agora-industrie.de
www.agora-industry.org

Managing Director:
Markus Steigenberger
Chair of Supervisory Board: R. Andreas Kraemer
District Court: Charlottenburg, HRB 126 115 B
Registered Office: Berlin | Germany
VAT ID: DE288357959

Bank Details:
National-Bank AG
IBAN: DE84 3602 0030 0003 8937 58
BIC: NBAGDE3E
EU Transparency Register: 321342621105-20
German Lobby Register: R003460

In the fertilisers space, another PAS example is the COP30 Low-Emission Ammonia-based Fertiliser (LEAF)[7] initiative, championed by the Hydrogen Council and connected to the risk-sharing platform Low-Carbon Finance Accelerator, in which downstream demand is used to help de-risk upstream investments, creating stronger value chain integration and improving bankability for green commodity projects.

Overall, the key takeaway from these roadmaps and experiences is that successful transition strategies require integrated approaches: combining finance, technology, and markets; building on existing institutional frameworks; and aligning supply- and demand-side actors.

(d) How can a just, orderly and equitable transition best reflect the diverse realities of countries at different stages of development and with different degrees of dependence on fossil fuels?

Green industrial development must be embedded within broader economic diversification pathways. Insights from the OCDE report on the Equitable Framework and Finance for Extractive-based Countries in Transition (EFFECT)[8] highlight that while hydrogen and its derivatives are promising, they are unlikely to fully replace fossil-fuel revenues on their own. This underscores a critical lesson: **no single sector can substitute fossil fuels**. Instead, countries need a portfolio approach that combines green hydrogen and derivatives with other opportunities such as critical raw materials value chains or lithium-ion battery manufacturing.

Another aspect to be considered is that rather than simply recommending "produce" or "export" green ammonia, it is crucial to consider the **constraints faced by energy-scarce countries**, particularly their domestic electricity and water needs. Quantifying the

[7] https://hydrogencouncil.com/en/global-alliance-launches-leaf-initiative-at-cop30-to-scale-low-emission-ammonia-fertilizers/

[8] https://www.oecd.org/en/publications/equitable-framework-and-finance-for-extractive-based-countries-in-transition-effect_7871c0ad-en.html EFFECT is also a PAS initiative offering "a toolbox for policy makers in fossil fuel and mineral-rich producing countries to chart just, realistic, implementable low-carbon pathways, consistent with their development priorities" https://climateaction.unfccc.int/CopsAndSummits/COP30

renewable energy requirements for green ammonia or green iron production, and comparing these with domestic demand, is necessary to understand the scale of resource allocation and potential trade-offs.

At the same time, **decentralised ammonia production systems** – primarily driven by renewable energy-based technologies – may offer a complementary pathway by reducing transport and distribution barriers and improving access in regions far from production hubs or ports[9]. Such decentralised approaches could be particularly relevant for countries in the Global South that are heavily reliant on fertiliser/ammonia imports, potentially supporting both supply security and sectoral decarbonisation while remaining mindful of domestic resource constraints. For instance, Brazil is the largest importer of fertilisers with around 8 Mt of urea imports per year[10]. Renewable electricity needed to cover this demand would be around ~42 TWh (with assuming 52 kWh/kg H_2 of electrolyser power consumption). To put this number into context, 42 TWh is approximately one third of the electricity produced from solar and wind power combined in Brazil in 2023, which equates to around 146 TWh[11].

In our green ammonia example, a just and equitable transition must also address the food security risks of natural gas–based fertilisers while ensuring that **green fertiliser production does not make food more expensive**. Our analysis supports this narrative with showing cheaper ammonia production / export costs with green production pathways by 2040, in comparison to fossil-based ammonia prices of today. Evidence from early green ammonia procurement suggests a modest impact on prices: India's first tender showed that blending renewable ammonia would raise costs by only 1–5%, well within normal annual price volatility of 20–40%[12].

[9] See Agora Industry's study on "Renewable nitrogen and ammonia: a new frontier for decentralised fertiliser production" https://www.agora-industry.org/news-events/renewable-nitrogen-and-ammonia-a-new-frontier-for-decentralised-fertiliser-production

[10] See https://www.cnnbrasil.com.br/agro/ureia-dispara-e-mercado-reduz-negociacoes-em-meio-a-guerra-do-ira/

[11] https://www.epe.gov.br/sites-en/publicacoes-dados-abertos/publicacoes/PublishingImages/Paginas/Forms/Publicaes/Summary%20Report%202024.pdf

[12] Forthcoming study by the Green Hydrogen Organisation (GH2) on green fertilisers in MENA explores how to decarbonise food systems while strengthening industrial value chains.

Exporter–importer collaboration is also needed for a just, orderly and equitable transition. A demand-side anchor could be a **buyer's alliance** between the EU as the world's second-largest fossil fuel importer (~20%) with other major importers (e.g., China, Japan, South Korea, India) to steer demand toward green substitutes such as green ammonia or green iron, de-risk investments in producer countries, and create stable, long-term markets.

In parallel, the EU and other major importers could pursue structured **bilateral partnerships** with key supplier countries, combining a gradual, predictable reduction in fossil fuel trade[13] with targeted support for low-carbon industrial development. Priority should be given to countries with limited or newly discovered oil and gas reserves, which are still shaping their strategic investment choices, hence offering an opportunity to influence pathways toward assets aligned with a green economy.

[13] This aligns with a fairness-based approach to TAFF, acknowledging that fossil-fuel suppliers are political economies whose stability depends on export revenues as *in* Van de Graaf, T. Managing the geopolitics of Europe's fossil-fuel exit. *Nat Energy* **11**, 336–338 (2026). https://doi.org/10.1038/s41560-025-01957-9

Agora Industry
Agora Think Tanks gGmbH
Anna-Louisa-Karsch-Str. 2
10178 Berlin | Germany
info@agora-industrie.de
www.agora-industry.org

Managing Director:
Markus Steigenberger
Chair of Supervisory Board: R. Andreas Kraemer
District Court: Charlottenburg, HRB 126 115 B
Registered Office: Berlin | Germany
VAT ID: DE288357959

Bank Details:
National-Bank AG
IBAN: DE84 3602 0030 0003 8937 58
BIC: NBAGDE3E
EU Transparency Register: 321342621105-20
German Lobby Register: R003460