



Roadmap for G20 Nations to Scale Green Hydrogen Trade and Navigate Energy Security and Economic Resilience

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Abstract

Green hydrogen is emerging as a key driver of economic growth and energy security, offering G20 nations a viable path to decarbonise hard-to-abate sectors, reduce reliance on fossil fuels, and enhance resilience. Scaling global trade in green hydrogen and its derivatives can mitigate geopolitical risks, accelerate renewable energy deployment, and create new economic opportunities – if judiciously deployed in sectors where the fundamentals support its use.

Energy security remains a pressing challenge across the G20. In 2022, member countries spent a record \$1 trillion on fossil fuel subsidies – more than double pre-pandemic levels – underscoring the continued reliance on conventional energy. In the same year, oil and gas prices surged by roughly 42–64%, disrupting economies and straining government budgets in both developed and developing countries. Access and affordability also persist as critical issues – 43% of Africa's population lacks electricity access, while Brazil has seen politically sensitive energy price surges.

As a clean alternative molecule, green hydrogen can help mitigate the inherent vulnerabilities of our fossil fuel-dependent energy system and complement the shift to a renewable electricity-based future. According to the International Renewable Energy Agency, green hydrogen could reduce global emissions by up to 10% and meet 12% of energy demand by 2050 – if adopted widely in industries like fertilisers and chemicals.

The global green hydrogen landscape is advancing rapidly. Countries like Australia, Brazil, India, and Namibia are leveraging policies and incentives to drive down production costs. Meanwhile, the EU aims to balance domestic production with imports to meet its climate targets, and Japan and South Korea are scaling up imports to meet energy needs.

Realising green hydrogen's full potential will require greater international coordination – especially on cross-border trade, certification, infrastructure, and risk mitigation. G20 nations can lead this effort by establishing shared goals, aligning regulatory frameworks, and creating platforms for public–private collaboration. Harmonising sustainability standards and implementing financial tools like contracts for difference (CfDs) can unlock investments and scale demand.

This transition presents a key opportunity for Global South economies – such as India, Brazil, and African nations – to capitalise on their abundant renewable energy resources, strengthen their energy sovereignty, and position themselves as central players in the clean energy markets. Rather than continuing in extractive roles, these countries can build domestic value chains and become net energy exporters in a net-zero world.

In this context, this brief identifies gaps and shared priorities in G20 hydrogen strategies, offering recommendations for building a scalable, secure, and inclusive global green hydrogen market.

Keywords: Green Hydrogen, Decarbonisation, Trade, Policy, Market Development, Cooperation, G20

Diagnosis

Context

Green hydrogen is essential for deep decarbonisation of hard-to-abate sectors. While direct electrification and building robust domestic markets are first priorities, enabling international trade can help balance supply and demand, unlocking investments and reshaping global energy markets.

As of 2024, conventional grey hydrogen consumption exceeds 97 million tonnes, with G20 nations accounting for over 80%.¹ These countries trade over \$11 billion worth of grey hydrogen and ammonia,² a figure expected to grow exponentially with the inclusion of derivatives. Yet, the global landscape is shifting from grey to green, despite market uncertainty, policy gaps, and the absence of offtakers slowing momentum.

At the 19th G20 Summit in Brazil, leaders committed to scaling up clean energy investment, including green hydrogen, in developing countries. The Brazilian presidency launched a roadmap to mobilise capital and reducing investment risk – key enablers for expanding green hydrogen infrastructure and encouraging future trade.³

To accelerate the global green hydrogen trade, G20 nations need pragmatic alignment in establishing actionable pathways for the G20's industrial decarbonisation efforts. While reflecting upon these challenges, this brief also

¹ International Energy Agency, *Global Hydrogen Review 2024* (Paris: IEA, 2024), accessed March 17, 2025, <https://www.iea.org/reports/global-hydrogen-review-2024>.

² RMI analysis of global export and import data of hydrogen and ammonia (both aqueous and anhydrous). Data sourced from World Bank, "World Integrated Trade Solution," accessed March 17, 2025, <https://wits.worldbank.org/Default.aspx?lang=en>.

³ International Energy Agency, *Roadmap to Increase Investment in Clean Energy in Developing Countries: An Initiative by the G20 Brazil Presidency* (Paris: IEA, 2024), <https://iea.blob.core.windows.net/assets/6ac243a9-247b-4b79-bc01-0e7730434118/RoadmaptoIncreaseInvestmentinCleanEnergyinDevelopingCountriesaninitiativebytheG20BrazilPresidency.pdf>.

outlines strategies to expand green hydrogen trade, strengthening energy security and resilience across G20 nations.

Energy security and economic resilience drive the need for green hydrogen trade

Currently, global hydrogen/ammonia production relies on fossil fuels, where less than 1% of the 97Mt of hydrogen produced in 2023 was low emission.⁴ The 2022 global energy crisis exposed energy vulnerabilities, particularly in Europe, where the Dutch-TTF gas benchmark surged to about \$70/MMBtu – 10 times the 2019 average of about \$6/MMBtu.⁵ Brent crude oil prices rose by 42% and Henry Hub gas prices increased by 64%,⁶ destabilising industrial competitiveness and straining national budgets.⁷

Alongside fossil fuel-related risks, many countries in the Global South face unique vulnerabilities. South Africa, for example, endured severe electricity challenges in 2023, with load shedding occurring more than 90% of the year.⁸ Similarly, Brazil's energy crisis, exacerbated by prolonged droughts, led to increased electricity tariffs and surging inflation.⁹ These challenges highlight the diverse energy vulnerabilities that G20 nations experience, underscoring the urgent need to

⁴ International Energy Agency, *Global Hydrogen Review 2024*.

⁵ Statista Research Department. "Monthly Prices for Natural Gas in the United States and Europe from December 2014 to December 2024." Accessed March 17, 2025. <https://www.statista.com/statistics/673333/monthly-prices-for-natural-gas-in-the-united-states-and-europe/>.

⁶ Sun Mingsong et al., "The Russia-Ukraine Conflict, Soaring International Energy Prices, and Implications for Global Economic Policies," *Helion* 10, no. 16 (August 30, 2024): e34712, <https://doi.org/10.1016/j.heliyon.2024.e34712>.

⁷ Alex Wilson. "Emergency Intervention to Address High Energy Prices in the EU." Briefing. PE 733.687. Brussels: European Parliamentary Research Service, Members' Research Service, October 2022. Accessed March 17, 2025. [https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733687/EPRS_BRI\(2022\)733687_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733687/EPRS_BRI(2022)733687_EN.pdf).

⁸ BusinessTech, "The Only Reason South Africa Isn't at Stage 5 Load Shedding Right Now," BusinessTech, May 24, 2023, <https://businesstech.co.za/news/energy/744297/the-only-reason-south-africa-isnt-at-stage-5-load-shedding-right-now/>.

⁹ GNPW Group, "Energy Crisis in Brazil: A Challenge that Persists until 2025." October 23, 2024. <https://www.gnpw.com.br/en/energy-crisis/energy-crisis-in-brazil-a-challenge-that-persists-until-2025/>.

accelerate renewable energy deployment and reduce reliance on imported fossil fuels by locally producing green hydrogen and its derivatives.

G20 nations are promoting green hydrogen ecosystem development

As per the International Energy Agency's Green Hydrogen Review, achieving global net-zero targets by 2050 will require green hydrogen trade to exceed 70 million tonnes annually.¹⁰ As this transition accelerates, G20 economies can and are starting to position themselves as major exporters or importers, as highlighted in Figure 1.

Figure 1. G20 initiatives to accelerate green hydrogen ecosystem development

Leading producers — including the United States, India, Australia, North Africa, and Saudi Arabia — are leveraging low-cost renewables, vast land, and government incentives to scale production and access export markets.					Conversely, major economies — including the EU, Japan, and South Korea — are emerging as top importers due to limited domestic capacity, decarbonization commitments, and energy security priorities. By diversifying suppliers, both the EU and East Asian economies seek to mitigate geopolitical energy risks, such as those witnessed during the 2022 gas crisis.		
United States	Australia	Saudi Arabia	India	North Africa	Japan	S. Korea	EU
					Japan's Basic Hydrogen Strategy targets 20 million tonnes of annual demand by 2050	South Korea's hydrogen strategy aim to supply one-third of its energy mix by 2050, ~ 28 mtpa.	EU's REPowerEU plan aims to replace 10 million tonnes of fossil hydrogen with imports by 2030.

Sources: RMI compilation, based on U.S. Department of Energy, Hydrogen Laws and Incentives in Federal, Alternative Fuels Data Center, accessed March 17, 2025,

<https://afdc.energy.gov/fuels/laws/HY?state=US>; Ministry of New and Renewable Energy (MNRE), Government of India. National Green Hydrogen Mission. Accessed March 17, 2025.

<https://mnre.gov.in/en/national-green-hydrogen-mission/>; Australian Renewable Energy Agency, "Hydrogen Headstart Round 1." Accessed March 17, 2025,

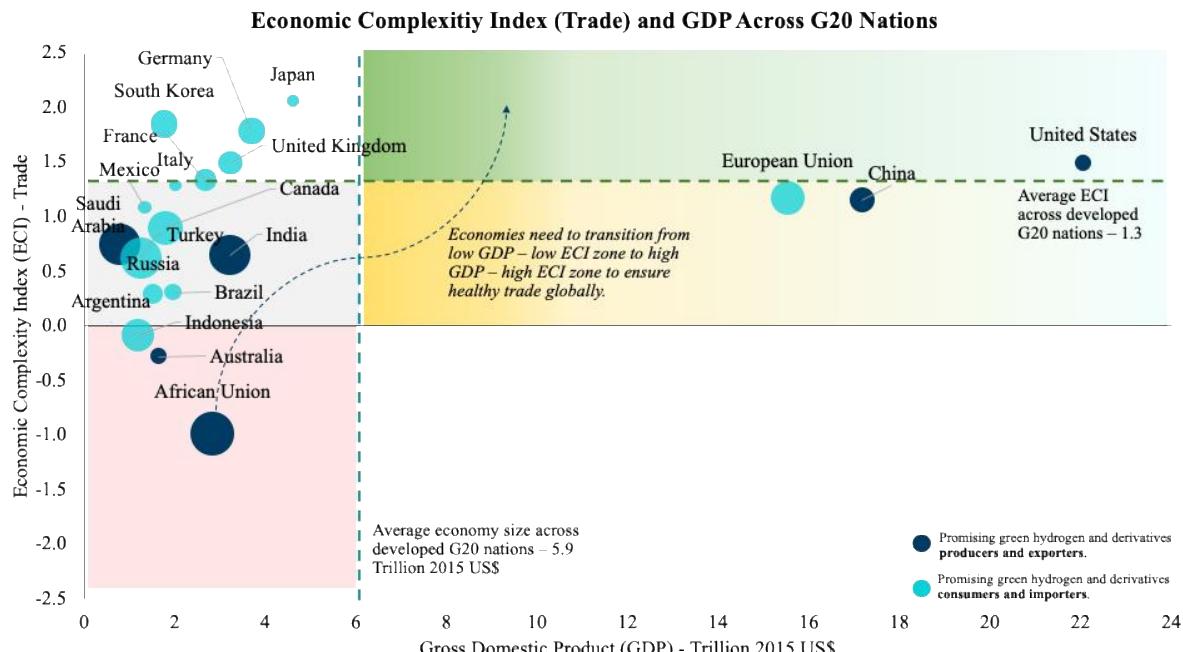
¹⁰ International Energy Agency, Global Hydrogen Review 2024

<https://arena.gov.au/funding/hydrogen-headstart/>; Hydrogen Council and McKinsey & Company, The Africa Hydrogen Opportunity, March 2024, <https://hydrogencouncil.com/wp-content/uploads/2024/03/Hydrogen-Council-Africa-Hydrogen-Opportunity-.pdf>; ACWA Power, "NEOM Green Hydrogen Project," Accessed March 17, 2025, <https://acwapower.com/en/projects/neom-green-hydrogen-project/>; European Commission, REPowerEU Plan. COM (2022) 230 final, May 18, 2022. Accessed March 17, 2025. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52022DC0230>; Agency for Natural Resources and Energy (ANRE), Japan, Basic Hydrogen Strategy, June 6, 2023, Accessed March 17, 2025, https://www.meti.go.jp/shingikai/enecho/shoene_shinene/suiso_seisaku/pdf/20230606_4.pdf; Charles Lee, "S. Korea to Provide 27.9 Mil Mt/Year of 'Clean Hydrogen' by 2050," S&P Global Commodity Insights, November 26, 2021, <https://www.spglobal.com/commodity-insights/en/news-research/latest-news/energy-transition/112621-s-korea-to-provide-279-mil-mt/year-of-clean-hydrogen-by-2050>

Economic complexity and trade readiness for green hydrogen growth

While G20 nations recognise green hydrogen's potential, many economies have lower GDP and moderate Economic Complexity Index (ECI) scores, affecting their ability to engage in global trade effectively (see Figure 2).

Figure 2. Transitioning economies for green hydrogen trade (ECI and GDP across G20 nations)



Countries	ARG	AUS	BRA	CAN	CHN	FRA	GER	IND	IND	ITA	JAP	S.KOR	MEX	RUS	SAR	AB	TUR	UK	US	EU	AU
Hydrogen and Ammonia Trade (Million USD - Export + Import)	0.1	200.9	208.8	877.8	446.6	348.1	531.5	1227.7	802.6	96.1	113.3	592.6	127.6	295.0	1250.3	1250.3	441.5	194.7	830.3	1399.6	

Notes: (1) EU data excludes countries treated separately, such as France, Italy, and Germany. (2) The AU represents 55 economies, officially referred to as member states. See AU, "Member States," accessed March 17, 2025, https://au.int/en/member_states/countryprofiles2

Sources: RMI Analysis based on data from Observatory of Economic Complexity (OEC), "Economic Complexity Index (ECI) Rankings," accessed March 17, 2025, <https://oec.world/en/rankings/eci/hs6/hs96?tab=ranking>. Methodological details can be found in V. Stojkoski, P. Koch, and C. A. Hidalgo, "Multidimensional Economic Complexity and Inclusive Green Growth," *Communications Earth & Environment* 4, no. 130 (2023), accessed March 17, 2025, <https://oec.world/pdf/multidimensional-economic-complexity-and-inclusive-green-growth.pdf>, and World Integrated Trade Solution (WITS) and represent figures for 2023. See World Bank, "World Integrated Trade Solution," accessed March 17, 2025, <https://wits.worldbank.org/Default.aspx?lang=en>.

The ECI measures an economy's productive capabilities based on export diversity and sophistication. A higher ECI indicates a well-developed industrial base, capable of producing and exporting technologically advanced products, while a lower ECI suggests reliance on simpler, less diversified exports.

Among emerging hydrogen suppliers – excluding China and the US – most nations have GDP and ECI scores below the global average. These factors impact their ability to attract investment, develop infrastructure, and scale energy exports.

The AU, now a permanent member of the G20, currently accounts for just 3% of global hydrogen and ammonia trade.¹¹ Countries such as Egypt, Morocco, and Namibia¹² are emerging as potentially competitive green hydrogen producers with abundant renewable resources. However, many face deep structural and institutional challenges, including weak regulatory frameworks, water scarcity, foreign currency volatility, limited access to concessional finance, limited technological expertise, and underdeveloped energy and transport infrastructure.¹³

To fully leverage the opportunities presented by the green hydrogen transition, G20 economies could support promising suppliers in their move from low-income, less-industrialised economies to more advanced, diversified ones. However, it is important that support for green hydrogen development encourages pathways that go beyond extractivist approaches, aiming to foster domestic value addition, local employment, and industrial growth in producer countries.

Many emerging producers currently rely heavily on imports and face trade deficits. Developing their green hydrogen sectors – with G20 support – can help reverse these imbalances and reduce dependency on fossil fuel imports. This requires strategic investments in industrial capacity, trade facilitation, and policy reforms to enhance competitiveness, and improve exports.

¹¹ RMI analysis based on 2023 trade data from World Bank, *World Integrated Trade Solution (WITS)*, accessed March 17, 2025, <https://wits.worldbank.org/Default.aspx?lang=en>

¹² Hydrogen Central, "Four African Countries Primed for Green Hydrogen Production," Hydrogen Central, November 11, 2024, <https://hydrogen-central.com/four-african-countries-primed-for-green-hydrogen-production/>

¹³ Andries Dagnachew et al., *The Opportunities, Challenges and Potential for Hydrogen in Africa* (The Hague: PBL Netherlands Environmental Assessment Agency, 2023), accessed May 22, 2025, https://www.pbl.nl/sites/default/files/downloads/pbl-2023-the-opportunities-challenges-and-potentials-for-hydrogen-in-africa_5269.pdf.

Recommendations to G20 economies

G20 nations affirmed in the 18th Summit on G20 Voluntary Principles on Hydrogen the need for industry standards, hydrogen trade, and project collaboration.¹⁴ These principles also form the foundation of key enablers (Figure 3) that can scale green hydrogen trade.

Figure 3. Key trade enablers: Global advancements and challenges

	Infrastructure Preparedness	Standard and Certifications	Strategic Partnerships and Agreements	Trade and Financial De-risking Mechanisms
Description	Develop infrastructure around ports, pipelines, and storage to facilitate production, supply, and consumption. Ports will serve as key gateways for trade and investments in common-user infrastructure.	Standards and certification of green hydrogen and derivatives are essential to unlock global trade opportunities by ensuring that products comply with hydrogen import country standards.	Strategic partnerships play a vital role in fostering technology exchange, securing long-term offtake agreements, and promoting joint investments.	Structured trading mechanisms and financial instruments are crucial for de-risking hydrogen projects. Tools like Contracts for Difference (CfDs) and sovereign guarantees can stabilise prices and mitigate market risks.
Global Advancements	More than 100 new hydrogen and ammonia terminals and port infrastructure projects could be realised by the end of the decade. G20 economies are investing in port-based hub development.	Many G20 nations, including the European Union, Japan, South Korea, India, and the United States, among others, have their own green hydrogen standards and certifications.	Multilateral and bilateral alliances and strategic partnerships are being formed among G20 nations. Some key examples include Australia with Germany, Japan with the Netherlands, and H2 Europe with Chile.	Economies are focusing on scaling blending finance, Export Credit Agencies (ECA), and CfDs via auction mechanisms. SDG Namibia One, the UK's 5 billion Euros support package, and the H2Global Auction are key examples.
Key Challenges	Port infrastructure and other shared-user facilities face significant challenges due to high costs, the risk of underutilisation, and the potential for stranded assets.	Limited cross-border recognition, emission accounting misalignment, and lack of coverage for derivatives.	Limited bilateral offtake agreements, infrastructure gaps, and regulatory uncertainty.	Auction-based mechanisms, the hydrogen price index, and leveraging global funding models for investment are failing to scale and attract major industry players due to price volatility and uncertain demand.

Source: RMI compilation

¹⁴ KAPSOM, "The 18th G20 Summit Boosts the Development of Green Hydrogen in India | JMM Visits KAPSOM," October 19, 2023, <https://www.kapsom.com/gtstrughdiijvc/>.

Aligning with trade enablers, the following are five key recommendations to G20 nations that can promote green hydrogen production and trade, leading to enhanced energy security and economic resilience.

1. Invest in port infrastructure to enable large-scale hydrogen trade

Scaling green hydrogen trade requires investment in dedicated port infrastructure for exporting and importing hydrogen derivatives. Countries like Germany and the US have already committed funds to port infrastructure,¹⁵ while India, Brazil, South Africa, and various AU members are adding it to their national strategies.¹⁶ The G20 could accelerate investments in critical ports for hydrogen trade by establishing co-financing mechanisms, issuing targeted commitments, and including port infrastructure in broader hydrogen financing frameworks. The G20, via government-to-government (G-to-G) discussions, could also facilitate port-to-port investment, bridging infrastructure gaps among suppliers and the consumer economy.

2. Harmonise green hydrogen standards and certification for global fungibility

G20 nations can align on a unified methodological framework to synchronise national green hydrogen standards and certifications. The International Organisation for Standardisation is developing a hydrogen standard that can be

¹⁵ Uniper, "Green Wilhelmshaven: To New Horizons," accessed March 17, 2025, <https://www.uniper.energy/solutions/energy-transformation-hubs/energy-transformation-hub-northwest/green-wilhelmshaven>; U.S. Department of Energy, "Gulf Coast Hydrogen Hub," accessed March 17, 2025, <https://www.energy.gov/oecd/gulf-coast-hydrogen-hub>.

¹⁶ MNRE, National Green Hydrogen Mission; Government of Brazil. "Brazil Publishes National Hydrogen Program," August 2022. Accessed March 17, 2025. <https://www.gov.br/en/government-of-brazil/latest-news/2022/brazil-publishes-national-hydrogen-program>; Government of South Africa. "Minister Blade Nzimande Launches Hydrogen Society Roadmap," February 17, 2022. Accessed March 17, 2025. <https://www.gov.za/st/news/speeches/minister-blade-nzimande-launch-hydrogen-society-roadmap-17-feb-2022>; Green Building Africa-Net Carbon Zero Buildings and Cities, "African Union Approves African Green Hydrogen Strategy and Action Plan," December 22, 2024, <https://www.greenbuildingafrica.co.za/african-union-approves-african-green-hydrogen-strategy-and-action-plan/>.

adopted globally to establish a uniform approach for measuring greenhouse gas emissions across the value chain.¹⁷ Several nations have already introduced hydrogen certification schemes. G20 nations can build on the COP29 Hydrogen Declaration by moving from agreement to implementation, working together to operationalise mutual recognition of certifications and align with globally recognised standards.¹⁸

3. Establish green hydrogen (+ derivatives) corridors through bilateral and multilateral agreements

G20 nations can formalise partnerships to create dedicated hydrogen trade routes. Existing agreements, such as the Africa–EU Green Energy Initiative, the Japan–Australia Partnership, and the EU-Japan Memorandum of Cooperation,¹⁹ highlight growing trade ambitions. The G20 can facilitate the establishment of hydrogen corridors – connecting the Middle East and North Africa with Europe,²⁰ India with Europe,²¹ South Asia,²² etc. – leveraging pre-feasibility studies to strengthen G-to-G collaboration.

¹⁷ International Organization for Standardization (ISO), ISO/TS 19870:2023—Hydrogen Technologies: Methodology for Determining the Greenhouse Gas Emissions Associated with the Production, Conditioning, and Transport of Hydrogen to Consumption Gate, 1st ed. (2023), <https://www.iso.org/standard/83408.html>.

¹⁸ COP29 Azerbaijan, COP29 Hydrogen Declaration, accessed March 17, 2025, <https://cop29.az/en/pages/cop29-hydrogen-declaration>.

¹⁹ European Commission, EU-Africa: Global Gateway Investment Package – Green Energy Initiative, October 2023, accessed March 17, 2025, https://international-partnerships.ec.europa.eu/document/download/91802393-289f-4c46-b57f-baf8a6f0bb2a_en?filename=aegei-factsheet-nov-2023_en.pdf; Australian Government Department of Foreign Affairs and Trade, "Clean Hydrogen Collaboration with Japan," February 2022, accessed March 17, 2025, <https://www.dfat.gov.au/about-us/publications/trade-investment/business-envoy/business-envoy-february-2022/clean-hydrogen-collaboration-japan>; European Commission, "EU and Japan Step up Cooperation on Hydrogen," accessed March 17, 2025, https://ec.europa.eu/commission/presscorner/detail/en/ip_22_7322.

²⁰ Giampaolo Cantini, "COP28 and the Growing Europe-MENA Hydrogen Connection," Atlantic Council, October 13, 2023, <https://www.atlanticcouncil.org/blogs/energysource/cop28-and-the-growing-europe-mena-hydrogen-connection/>

²¹ Aida Čučuk, "India and Germany Forge Green Hydrogen Ties," Offshore Energy, October 28, 2024, <https://www.offshore-energy.biz/india-and-germany-forge-green-hydrogen-ties/>

²² Press Trust of India, "India, Singapore Working on Green Energy Corridor," The Economic Times, January 17, 2025, <https://economictimes.indiatimes.com/industry/renewables/india-singapore-working-on-green-energy-corridor/articleshow/117338941.cms?from=mdr>.

4. Create regional hydrogen buyers' clubs to aggregate demand and stabilise prices

Regional G20 hydrogen buyers' clubs can act as demand aggregators, facilitating structured offtake auctions and enhancing trade predictability. These clubs could be structured as a public–private partnerships, leveraging national bodies and private investors to create trading platforms. There are analogous initiatives like the Sustainable Steel Buyers Platform, a first-of-its-kind buyers' group accelerating steel decarbonisation through collaborative procurement and market action in the iron and steel sectors.²³ Several G20 nations are already piloting contract-for-difference (CfD) models, including Germany's H2Global and Japan's CfD scheme.²⁴ Redirecting a portion of fossil fuel subsidies allocated by G20 governments in 2022²⁵ toward hydrogen trade incentives could further enhance market competitiveness. The buyers' club could also help establish hydrogen price index, building on existing initiatives like the European Energy Exchange (EEX), Indian Gas Exchange (IGX), and Gesellschaft für Internationale Zusammenarbeit (GIZ) in India.²⁶ To support market liquidity, the G20 could encourage the development of digital platforms and trading systems, enabling cross-border price discovery and a unified market for green hydrogen.

5. Strengthen regional green hydrogen investment facilities and de-risking instruments

²³ RMI, "Sustainable Steel Buyers Platform," RMI, accessed April 03, 2025, <https://rmi.org/our-work/climate-aligned-industries/sustainable-steel-buyers-platform/>

²⁴ H2Global Stiftung, "Shaping the Global Energy Transition," accessed March 17, 2025, <https://www.h2-global.org>; Rachel Parkes, "ANALYSIS | Japan Invites First Applications for Clean Hydrogen CfDs under Giant \$20bn Tender Scheme," HydrogenInsight.com, December 3, 2024, <https://www.hydrogeninsight.com/policy/analysis-japan-invites-first-applications-for-clean-hydrogen-cfds-under-giant-20bn-tender-scheme/2-1-1747279>.

²⁵ Tara Laan et al., *Fanning the Flames: G20 Provides Record Financial Support for Fossil Fuels* (International Institute for Sustainable Development, accessed March 17, 2025), <https://www.iisd.org/publications/report/fanning-flames-g20-support-of-fossil-fuels>.

²⁶ EEX, "Press Release - EEX, IGX and GIZ to Jointly Develop Hydrogen Trading Market in India," October 16, 2024, https://www.eex.com/en/newsroom/detail?tx_news_pi1%5Baction%5D=detail&tx_news_pi1%5Bcontroller%5D=News&tx_news_pi1%5Bnews%5D=12881&cHash=15139df65abb35bd36efff2adc25cd80.

Instruments such as loan guarantees, green bonds, concessional financing, and insurance can help de-risk projects and bridge the cost gap, facilitating final investment decisions. While initiatives like the SA-H2 Fund (South Africa–Europe)²⁷ have demonstrated early progress, greater coordination with multilateral development banks (MDBs) such as the Asian Development Bank and African Development Bank can enhance capital flows and de-risk investments at scale, modelled after past UK–World Bank initiatives in Brazil.²⁸ A mix of financial instruments is necessary to address these varying risks effectively. Instead of a centralised G20 facility, a region-specific strategy may yield better results, with MDBs playing a key role in designing financing mechanisms tailored to regional market conditions.

With these strategic actions, G20 nations can drive economic resilience, enhance energy security, and position themselves as leaders in the green hydrogen economy. By fostering international collaboration, G20 countries can mitigate energy price volatility, reduce reliance on fossil fuel imports, and secure long-term economic competitiveness.

²⁷ Climate Fund Managers, "Unveiling The 'SA-H2 Fund': South Africa's Dedicated Green Hydrogen Fund," accessed March 17, 2025, <https://climatefundmanagers.com/2023/06/20/unveiling-the-sa-h2-fund-south-africas-dedicated-green-hydrogen-fund/>.

²⁸ G20 Brazil 2024, "International Cooperation Strengthens Measures for the Energy Transition," accessed March 17, 2025, <https://g20.gov.br/en/news/international-cooperation-strengthens-measures-for-the-energy-transition>.

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