Green iron trade can boost economic growth and employment across countries

Press Release

New Agora Industry study finds green iron trade can support economic activity and industrial growth on both sides of the market. Realising these gains requires investment in renewables, hydrogen infrastructure and electrification, alongside credible demand and trade partnerships.

Berlin, 8 October 2026. Global green iron trade could create new centres of industrial value while supporting jobs and growth in established steelmaking economies as they transition to low-carbon steel production, according to a new Agora Industry study. Across the countries modelled through 2050, on average economies are larger with green iron trade than without it. Exporters can capture substantial new GDP, employment and household income from new green industrial production and export revenues. Importers can decarbonise ironmaking while strengthening the downstream segment of the supply chain, increasing manufactured goods exports, creating jobs and enhancing competitiveness.

For exporters upgrading from traditional iron ore to green iron exports, the gains are straightforward: every tonne produced and shipped delivers clear economic benefits. For example, Brazil could gain up to 40 billion US dollars in additional GDP and more than 400,000 jobs by exporting all its green iron, while Australia could secure up to 16 billion dollars and around 110,000 jobs. For established steelmaking countries, the optimal strategy lies in importing roughly half of required green iron while maintaining the other half through domestic production. In this way, South Korea stands to add up to 34 billion US dollars to its GDP and create about 340,000 jobs, while the United Kingdom could gain nearly 4 billion US dollars in additional GDP and 140,000 jobs.

"Green iron trade can create new centres of economic growth while strengthening the industrial base of established steelmaking economies. Backed by investment in renewables and clean technologies, strategic partnerships can also help diversify supply chains and strengthen resilience," said Julia Metz, Director of Agora Industry.

The analysis, based on modelling conducted by Cambridge Econometrics, is the first of its kind to examine the macroeconomic effects of global green iron trade across ten potential exporting and importing economies. Two green iron trade (GIT) scenarios are assessed against a no-GIT baseline: a mid-GIT scenario in which importing countries source around half of their iron from imports, and a full-GIT scenario in which the corresponding figure is close to 100 percent. The scenarios model various parameters including job gains, GDP growth, household income and fiscal expenditure for each country.

New industrial hubs and hundreds of thousands of jobs

Green iron trade allows energy-intensive ironmaking to take place where there is high renewable potential. Under the study's assumptions, Brazil, Australia and South Africa, for example, can produce renewable hydrogen at roughly half the cost of countries such as Japan, Germany and South Korea. The resulting green iron can then be

Press Contact
Maia Haru Hall, Manager Press & Communications – International Energy Transition
Email: maiaharu.hall@agora-thinktanks.org
Telephone: +49 15904354762

Agora Industry
Anna-Louisa-Karsch-Str. 2
10178 Berlin | Germany
www.agora-industry.org

shipped as hot briquetted iron to established steelmaking economies in Europe, Asia and elsewhere.

Most additional jobs are created in services and downstream activities as new export revenues circulate through the wider economy. Higher trade volumes generate further gains in the full-trade scenario as green iron production expands to meet international demand.

Green iron imports support growth as steel economies decarbonise

For most established steelmaking economies, green iron is the only route to phase out coal-based production, and green iron imports can boost supply while maintaining economic activity and strengthening downstream manufacturing. Investment in electrified steelmaking, for example through electric arc furnaces, and continued downstream manufacturing, services and construction activity help sustain economic output. The modelling also finds that greater green iron availability supports the export of manufactured goods, allowing importing economies to capture more value from their existing industrial base.

Germany shows how green iron imports can support the transition as domestic production scales. The modelling assumes continued investment in domestic renewable hydrogen and hydrogen-based direct reduced iron (H2-DRI) capacity, with green iron imports providing an additional supply route. Added GDP peaks at 1.43 percent higher in 2035 than in the no-trade scenario, while household income is 1.27 percent higher. The additional boost from green iron trade narrows in the 2040s as domestic H2-DRI capacity comes online, but GDP remains above the no-trade trajectory until Germany's climate neutrality target year 2045.

The macroeconomic gains come alongside substantial emission reductions. Under the mid-green iron trade scenario, global economy-wide cumulative emissions between 2025 and 2050 fall by more than 48 percent compared with the reference scenario. Iron and steel sector carbon emissions drop by around 36 percent, as green iron trade accelerates the phase-out of coal-based blast furnace production.

Implementing policies now to realise the green iron opportunity

Realising these benefits requires renewable energy and hydrogen infrastructure, financing and credible long-term demand, the authors note. Trade and industrial partnerships can also lay the foundation for these new green iron value chains. For instance, the EU-Mercosur agreement, the EU-South Africa Clean Trade and Investment Partnership (CTIP), the Regional Comprehensive Economic Partnership (RCEP) and Australia's green economy partnerships with Japan and South Korea could help reduce trade and investment barriers and mobilise finance.

"The window to build a global green iron market is now. To capture these economic and climate benefits by mid-century, trade must scale by 2035 – requiring infrastructure, investment and trade partnerships to be put in place today," emphasised Metz.

Exporters can use concessional finance, public guarantees and other de-risking mechanisms to bring hydrogen-based iron production online, while ensuring that export gains and job creation are broadly distributed across the economy and strengthen domestic industry. Importers can support demand through green procurement, and investment in electric arc furnaces, while implementing policies for worker retraining and job relocation towards downstream segments of the steelmaking supply chain.

Press Contact
Maia Haru Hall, Manager Press & Communications – International Energy Transition
Email: maiaharu.hall@agora-thinktanks.org
Telephone: +49 15904354762

Agora Industry
Anna-Louisa-Karsch-Str. 2
10178 Berlin | Germany
www.agora-industry.org

The 53-page study Green iron, shared gains: The macroeconomic benefits of global green iron tradewas modelled by Cambridge Econometrics and is a sequel to Agora Industry's previous technoeconomic analysis of green iron trade. It examines ten economies: Australia, Brazil, Saudi Arabia, South Africa and Sweden as potential exporters; and China, Germany, Japan, South Korea and the United Kingdom as potential importers. These countries account for around two thirds of global steel production and 60 percent of global steel consumption. The analysis, alongside ten country case study factsheets, is available for free download at www.agora-industry.org.

About Agora Industry

Agora Industry develops scientifically sound and politically feasible strategies for successful pathways to a climate-neutral industry – in Germany, Europe and internationally. The organisation which is part of the Agora Think Tanks works independently of economic and partisan interests. Its only commitment is to climate action.

Press Contact
Maia Haru Hall, Manager Press & Communications – International Energy Transition
Email: maiaharu.hall@agora-thinktanks.org
Telephone: +49 15904354762

Agora Industry
Anna-Louisa-Karsch-Str. 2
10178 Berlin | Germany
www.agora-industry.org