

# Position Paper

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An EU industrial policy providing a strong business case for green investment in Europe

New global reality requires disruptive thinking and innovative measures



# Executive summary

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A thriving European steel industry is crucial for the EU's strategic autonomy and resilience. However, over the past decade, the EU has shifted from being a net steel exporter to a major net steel importer, losing 30 million tonnes of sales on the EU and export markets. Additionally, the EU steel industry has lost 26 million tonnes of steel production capacity and 25% of its workforce.

The EU is facing a new global reality. To ensure that the EU remains competitive in the middle of the greatest transformation of the industry towards climate-neutrality, it is essential to adopt disruptive thinking and innovative measures. Otherwise, competitors such as the US and China are likely to create a more attractive investment and production environment for green steel, further threatening the EU's strategic autonomy. The US Inflation Reduction Act (IRA) alone will provide at least USD 85 billion of funding for steel production and upstream energy requirements.

Steel is essential for a climate-neutral economy. Renewables, hydrogen, wind and electric vehicles, are all dependent on steel. It is estimated that more than 74 million tons of steel will be required for the expansion of renewable energy generation alone, demonstrating that the foundations of the Net-zero Age are made of steel. A successful EU industrial policy requires a value chain-based approach, with **steel at the core of the Green Deal Industry Plan** and as an **integral part of the Net-Zero Industry Act**. To transition steel and other energy-intensive industries towards carbon neutrality and enhance circularity while ensuring the EU industry's competitiveness is protected, the following enabling conditions are indispensable:

**1. Access to sufficient and globally cost-competitive fossil-free energy** and primary and secondary raw materials such as **steel scrap, which is strategic**.

- The steel industry calls for a thorough impact assessment of all options to marginal pricing in the electricity market-design including the possibility to adopt non-market-based mechanisms such as regulated tariffs, also for energy-intensive industries, public guarantee schemes for long-term energy arrangements such as Power Purchase Agreements (PPAs) and hedging, and a system-efficient redistribution of revenues to support consumers and investment in renewables.

- The steel sector also asks for the prioritisation of supply of hydrogen (H<sub>2</sub>) and related infrastructure planning based on the GHG abatement potential, in particular in the initial phase when hydrogen is in short supply.

**2. Better tailored, more certain, clear and flexible funding and financial incentives** across the EU are required, as well as faster processing of applications. Increased support for the roll-out of low-carbon steel projects rather than for research and innovation is necessary.

**3. Establishment of lead markets for green steel and products** (including low-CO<sub>2</sub> steel); this could be achieved through public procurement, quotas, ambitious GHG thresholds or introduction of GHG pricing for final products based on their lifecycle emissions.

**4. Trade policy** that levels the playing field with global competitors:

- Maintaining the **EU steel safeguard** to prevent serious injury as long as the necessary conditions are met. Promoting an EU-US Global Arrangement on Sustainable Steel that effectively tackles global steel excess capacity and incentivises ambitious steel decarbonisation in other regions, with comparable measures in the US and in the EU.
- Adopting a **solution for EU steel exports before the Carbon Border Adjustment Mechanism** kicks in in 2026 to prevent further losses of EU steel exports.

It is also essential to prioritise and mainstream industrial policy and competitiveness while reducing regulatory burdens in all policy initiatives and legislative proposals, ensuring long-term predictability.

**Steel is 100% recyclable** without loss of its essential properties, making it a permanent material for the circular economy. The EU steel industry is the most important recycler in Europe in terms of collection rate (88%), tonnages (87,8 million in 2021) and value. With steel scrap recycling, the steel sector reduces the EU's CO<sub>2</sub> footprint by 132 million tons every year, equivalent to the annual related emissions of 19 million EU citizens. With 60 industrial-scale decarbonisation projects already underway, the steel industry is on the path to carbon neutrality and aims to cut its emissions by at least another 30% (a reduction of 80 million tonnes of CO<sub>2</sub>) by 2030.

There are more than 3,500 grades of steel in use, 75% of which have been developed in the past 20 years – better-performing, lighter and greener. Steel is at the core of our modern world. It is essential to our lives and to the green economy, from bikes, trains, cars and e-cars to windmills and solar panels, bridges, buildings, heating systems, pipes and sanitation, machines, medical equipment, defence, and much more. The EU steel industry provides 310,000 direct jobs and creates seven additional jobs for each of them in the EU economy, totalling 2.5 million jobs<sup>1</sup>.

<sup>1</sup> The Impact of the European Steel Industry on the EU Economy: An updated and extended analysis, Oxford Economics, July 2019

# New global reality requires disruptive thinking and innovative measures



The European steel industry welcomes the renewed impetus on industrial policy at EU level, including the European Council Conclusions of 9 February 2023. The ‘Green Deal Industrial Plan’ comes at a time of great uncertainty to our sector and other industries, with companies under immense pressure to decide where best to undertake the required investments to decarbonise.

Our global competitors, such as the US, China and India, are stepping up efforts to create a favourable investment environment for climate neutrality, including a direct focus on incentivising industrial decarbonisation projects. **The US Inflation Reduction Act (IRA) is a prime example.** The IRA provides direct support to the US steel industry’s decarbonisation and renewable energy investments using significant tax credits, grants and loans subsidising the production and sale of critical steel-intensive renewable energy systems and infrastructure. It also provides additional steel demand for the US steel industry, as it discriminates against non-US steel producers – including those from the EU - through its local-content requirements. We estimate that combined IRA and Department of Energy (DOE) funding will provide at least **USD 85 billion of funding for steel production and upstream energy.** The IRA has the potential to significantly decrease the cost of green hydrogen by about \$3/kg of H<sub>2</sub>, and up to \$4/kg H<sub>2</sub> with additional DOE funding secured. As a consequence of IRA/DOE, the **current energy cost gap between the EU and US could widen by up to 60%.** IRA funding has also the potential to decrease costs of Carbon Capture Utilisation and Storage technologies (CCUS) by between \$80 and up to \$100 (with additional DOE funding) per ton of CO<sub>2</sub>. In the absence of any new mechanisms in Europe, IRA and DOE funding will undoubtedly create a more competitive investment and production environment for green steel in the US. This **new global reality demands disruptive thinking and innovative measures from the EU.** While we agree that state aid procedures should be simpler, faster and more predictable, we stress that a real industrial policy strategy cannot be designed on state aid. We thus call for a comprehensive response at EU level that would preserve the integrity of the European internal market and provide a long-term framework that preserves our competitiveness and spurs our transition to a carbon-neutral economy.

# Steel is essential for a climate-neutral economy, including Clean Tech and Net-Zero Industry value chains



The European approach on industrial policy puts great emphasis on Clean Tech sectors and Net-Zero technologies. Abundant, secure and affordable fossil-free energy is a fundamental element for the future of the European industry and its economy. Therefore, we support strengthened measures that would entail a fast deployment of fossil-free energy and hydrogen production, as well as the necessary infrastructure.

Renewables, hydrogen, wind towers, solar panels, electric vehicles, are all dependent on and interlinked with steel. Steel is at the foundation of those value chains and they are at the foundation of circular steel value chains, as we recycle their steel scrap into new products. For every new megawatt (MW) of solar power deployed, between 35 to 45 tons of steel are required, while each new MW of wind power uses 120 to 180 tons of steel. To achieve the ambitious targets for 2030 set in the RED III proposal and the REPowerEU plan<sup>2</sup>, we will need an expansion of installed capacities of the main renewable energy (REN) sources that would equal to a 300% increase of the current solar PV capacity, and a 250% increase of wind power<sup>3</sup>. This means that more than **74 million tons of steel will be required for the expansion of renewable energy generation alone** (16.6 Mt for solar PV and 57.6 Mt for wind power). If we add the production of renewable hydrogen, the related infrastructure (e.g. pipelines, storage), the transport sectors and the transport infrastructure, this figure becomes much bigger. This shows that the foundations of the Net-zero Age are made of steel. **Steel must be at the core of the Green Deal Industry Plan and should be included in the Net-Zero Industry Act. Low carbon technologies for the transition and production of green steel, together with the related infrastructure, should also benefit from faster and simplified permitting procedures**, and not be limited to a restricted number of sectors. The Act should aim at identifying and reducing the overall regulatory burden in Europe on industry, including the steel sector.

The European steel industry is one of the most advanced sectors in terms of decarbonisation projects. We have currently over 60 industrial scale projects ready to be scaled up before 2030. These projects would require a total CAPEX of approximately €30 billion and a total OPEX of at least €53 billion (pre-crisis forecast). In addition, their implementation would entail an increase of energy needs by 165 TWh of electricity, of which 93 TWh is for hydrogen production and 75 TWh would be for other production processes. Some of these investment projects are at serious risk of being undertaken outside the EU.

<sup>2</sup> European Commission, 'REPowerEU: Joint European Action for More Affordable, Secure and Sustainable Energy', Communication, March 8, 2022, available at: <https://eur-lex.europa.eu>.

<sup>3</sup> The EU's Plan to scale Up Renewables by 2030: Implication for the Power System, Briefings de l'IFRI, Center for Energy and Climate, available at <https://www.ifri.org> (estimated wind power capacity in 2030: about 420 -480 GW; estimated solar PV capacity in 2030: about 380 – 410 GW)

## Access to cost-competitive and fossil-free energy



Today, the steel industry consumes around 75 TWh of electricity annually. Of these, about 55 TWh are purchased from the grid and the remaining are mainly produced from on-site waste gases generated in primary steel making. Access to cost-competitive and fossil-free energy is of paramount importance for today's competitiveness and for the future transition of the steel industry and other Energy-Intensive Industries (EIs). For EIs cost-competitive energy means energy at globally competitive prices.

The current economic situation is very urgent and **without dedicated solutions to provide relief for EIs, the ongoing de-industrialisation of Europe, triggered by the high energy prices will continue**, while decarbonisation will be hindered.

The **revision of the Electricity Market Design (EMD)** directive is an opportunity to secure cost-competitive fossil-free electricity. **All options to reform the EMD, and in particular concerning the short-term markets and pricing models should be considered and assessed** by the Commission, which should strive at benefitting European consumers from an ever increasing share of fossil-free generation in the markets. Alongside, the reform should also **improve access to long-term contracts** (i.e., Power Purchase Agreements (PPAs) and hedging contracts) for EIs, and to promote **demand response measures exclusively on a voluntary basis** where these are technically feasible and cost-efficient. PPAs are linked to the short-term market pricing signals and unable to effectively provide a structural solution for EIs, unless the price in short-term markets are back to pre-crisis level. Moreover, access to PPAs for EIs is hampered by economic and financial barriers, limiting their potential to unlock investments and deliver additional electricity at affordable levels. Financial instruments such as public guarantee schemes would support long-term energy offtake agreements for fossil-free electricity and hydrogen. The reform should also guarantee an effective redistribution of excess profits to sustain EIs affected by unbearable energy prices and to spur investment in additional capacity required by 2030 and 2050. Other non-market-based instruments to support the competitiveness of industry exposed to global competition on energy cost should be also allowed at national level, such as **regulated electricity tariffs for EIs**, or exemptions and derogations from levies and taxes.

Hydrogen and electricity, next to bioenergy, are fundamental elements of the decarbonisation strategy of the steel industry, however until 2035 their availability in industrially useful quantities will be scarce. The ongoing revision of the Renewable Energy Directive and the Hydrogen and Decarbonised Gas Market Package should strive at **achieving production of cost-competitive hydrogen and fossil-free electricity in the EU, while ensuring their uptake by EIs**. By promoting a **prioritisation of supply of H<sub>2</sub> and infrastructure development** based on the highest Greenhouse Gases (GHG) emissions abatement potential, policy makers can ensure that the transition of hard-to-abate sectors such as steel to low carbon technologies

will not be delayed. This principle should also be reflected in the design of the Hydrogen Bank. The recently adopted **delegated act on renewable hydrogen** contains improvements to the initial proposal. However, its impact should be regularly and thoroughly assessed to remove potential barriers to the production of fossil-free hydrogen, electricity and bioenergy in the EU. It is also important that the required additional fossil-free energy production capacity for industry is thoroughly assessed and mapped throughout the transition.

## A European approach to incentivize investments in low carbon technologies



While cost-competitive energy is fundamental for being competitive today, the roll-out of new technologies also requires the right financial incentives. The US IRA will deploy nearly USD 400 billion over the coming decade, as a comprehensive package that will substantially lower energy prices for US energy intensive industries, including for the production and use of green hydrogen. The European Union has launched several programmes that provide financial support to decarbonisation projects at EU and national level over the past years. Although these programmes collectively account for a substantial and comparable level of resources, they are fragmented and in most cases difficult to access. Short timelines for application and expenditure often do not match the time required for obtaining a permit by a company and the long lifecycle of decarbonisation projects in energy-intensive industries such as steel. Overly restrictive criteria that hinder technology neutrality or do not allow for a step-wise approach in terms of GHG abatement are another obstacle experienced by companies. **A re-think of existing funding and financial programmes is necessary to ensure that available resources can be used in synergy and that programmes are simplified and easy to access, which should result in a more certain access to funding for companies. Support for the roll-out of technologies at industrial scale – going beyond R&D&I - should be significantly increased, focusing not only on CAPEX but also on access to cost-competitive energy and hydrogen.** The incentives provided under the IRA translate into reduced cost production for less CO<sub>2</sub>-intensive production, as compared to the current level of cost production of conventional technologies. Current limitations on the calculation of the funding gap in the EU need to be addressed, **matching the level of incentives provided by our international competitors.** We welcome the proposal of President von der Leyen of a **European Sovereignty Fund** as one of the structural solutions for strategic sectors under the Green Deal Industrial Plan. **Contracts for Difference and public guarantees** should be considered among the potential **solutions to provide cost-competitive hydrogen and electricity.** The proposal of a pilot programme under the **Hydrogen Bank** granting a fixed premium for each kg of renewable hydrogen produced over a period of ten years is a good example of how support can be effectively designed and is welcomed by industry. However, this programme needs to be significantly expanded in terms of budget,

while also **ensuring that the support benefits industrial end-users**. Increased financing of programmes that would speed up the implementation of the hydrogen infrastructure, such as **Connecting Europe Facility** should be considered as well.

## Lead markets for green steel and products (including low-CO<sub>2</sub> steel)

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Significant market **instruments are needed to drive up demand for steel products with reduced CO<sub>2</sub> emissions**, but higher production costs. In order for these green steel products to be competitive on the market with conventional steel products, the major steel consuming sectors should be able to valorise the procurement of greener products. The Communication on the Green Deal Industrial Plan calls for stimulating the demand for net-zero products at large scale. This is a good basis to establish **lead market incentives which could include the use of relevant criteria in public procurement, quotas, ambitious GHG thresholds and the introduction of GHG pricing for final products based on their lifecycle emissions**. Whilst similar incentives are envisaged in proposed product policies, such as the Ecodesign for Sustainable Products Regulation and the revised Construction Products Regulation, it is not yet clear how this will work in practice in the context of an overall strategy, taking into account the simultaneous deployment of low CO<sub>2</sub> steelmaking technology.

The **Eco-design for Sustainable Products Regulation (ESPR)** will prove crucial for the future definition of green steel and promotion of its unique performance, sustainability and circularity. Steel should be recognised as a permanent material, since it is not being consumed but just used over and over again. Alignment and coherence with current legislation is essential as well as setting relevant performance and information requirements within it. The revision of the **Construction Products Regulation** should align as closely as possible to the ESPR, as steel is supplied into all product markets, not just construction. The setting of minimum environmental performance requirements is the right step to create a level playing field in the construction market among all member states.



## Ensuring open and fair trade

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Between 2009 and 2020 the **EU steel industry has lost 26 million** of tonnes of permanent steel capacity production, and 80,000 direct jobs, which equals to **25% of our workforce**. At the same time, **the EU shifted from being a net steel exporter into becoming a major net steel importer**, losing 30 million tonnes of sales on the EU and export markets. In the same period EU steel import volumes have doubled to 30 million tonnes.

**Global excess steel capacity** has been a major cause for this situation and since the introduction of the US Section 232 steel measure in 2018 it has only worsened. The OECD estimates global excess capacity at around 563 million tonnes in 2022 and predicts that global steelmaking will further increase by almost 6% over the next three years.

Since the elements that justified the extension of the EU steel safeguard measures in 2021 are still persisting, and have even worsened – in particular overcapacities and exposure to injury – **it is necessary to continue the EU's steel safeguard to prevent serious injury for as long as the necessary conditions are met**. Moreover, the IRA's domestic steel content requirements could further enhance steel trade deviation flows from the US to the EU. The envisaged EU-US Global Arrangement on Sustainable Steel to effectively tackle global steel excess capacity and incentivise ambitious steel decarbonisation in other regions, has to foresee comparable measures in the US and in the EU.

It is important to note that the large safeguard quotas do not replace the continued need for punctual antidumping actions if the conditions on a product and country-specific level are present. Reacting promptly to distorting steel imports by **applying the full scope of the modernised Trade Defence Instruments** is crucial for the EU steel industry.

New tools are necessary to effectively tackle distortions from imports and guarantee access to export markets: by making effective use of the **EU's Enforcement Regulation** to allow the use of sanctions when third countries adopt illegal measures; by **enforcing reciprocity** where third countries deny access to their markets, such as in restrictive public procurement regimes; by ensuring through conclusion of new **Free Trade Agreements (FTAs)**, or revision of existing ones, access to markets and compliance with EU standards on competition and state aid. In general, FTAs should be equipped with a stronger dispute settlement and powerful enforcement mechanisms, including the ability to impose prompt and effective remedies.

## Now is the time to actively promote industrial competitiveness



The US IRA shows that it is possible to have a proactive, structural, carbon-neutral industrial policy centred on incentives and industrial competitiveness, rather than relying primarily on obligations and targets complemented by insufficient and fragmented support. This approach should be taken as an example rather than being seen as a threat. Our vision has to nurture **international competitiveness and level-playing field**. By **mainstreaming and promoting these principles in all relevant policy areas and legislative proposals, we will be able to formulate legislation that delivers on climate change policy, while achieving prosperity for society**. They should be better embedded in the work organisation and planning of the European Commission and other institutions, including best practices such as a regular use of impact assessments.

## Effective carbon leakage instruments



The steel sector has the highest risk of carbon leakage among EILs. The political agreement on the **Carbon Border Adjustment Mechanism (CBAM)**, which will gradually complement and later replace the Emissions Trading System (ETS), entails a delicate transition phase for energy-intensive industries as regards the level playing field with third countries. CBAM can only partially prevent carbon leakage, and only on the internal market. The **solutions for the export market have to be introduced before the CBAM fully kicks in in 2026**, otherwise we **risk losing €45 billion of EU steel exports** and consequently related production capacity and jobs. Moreover, the **environmental integrity and effectiveness of this instrument will be further tested during its implementation via secondary legislation**; therefore carbon measurement methodology, default values and anti-circumvention measures have to be in place and effective to **ensure that CBAM is watertight**.

## Ensuring the access to raw materials to enable steel contribute to the Circular Economy



Every year, the steel sector recycles millions of tonnes of ferrous scrap recovered from processing and end-of-life products and is constantly engaged in the re-use and recycling of most of the industrial residues generated with steel. **Steel scrap generated in the EU should be considered as a strategic resource.** Its use is essential not only to the completion of the EU's circular economy, but also in supporting the EU's CO2 reduction objectives. Exporting EU waste challenges to third countries not adhering to similar environmental, health, safety and social standards hampers the same environmental and climate change objectives of the EU. Export of scrap has been increasing over the past years, reaching almost 20 million tonnes in 2021. But as we transition to low-carbon technologies, we expect shortages of scrap **before 2030**, as current scrap levels will not fulfil the demand. Stronger monitoring and audit system, along with well-defined and relevant environmentally sound management criteria and **tougher anti-circumvention measures under the Waste Shipment Regulation** would ensure the availability of secondary raw materials, supporting the decarbonisation of the EU steel industry.

The upcoming **Critical Raw Material Act** (CRM Act) is another opportunity to address availability and sourcing of primary and secondary raw materials and reduce EU dependency on several critical raw materials. This can be achieved by **including in the list of Critical Raw Materials key primary raw materials**, such as **nickel and manganese**, and other **critical secondary raw materials such as ferrous scrap** in the EU. If not addressed, their shortages can have a significant impact on key EU industries.

## Industrial Emissions Directive

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Permits are the licenses to operate, without them a company cannot run any business. EU companies can obtain a permit only if compliant with very strict requirements, which are mainly based on the respect of Best Available Techniques (BAT) in a defined industrial activity. The **Industrial Emissions Directive (IED) has proven very efficient over the past ten years** at protecting human health and the environment by reducing harmful industrial emissions across the EU. The **IED should stay focused on its main objective, identifying and promoting what is currently best in industry**, and not aim at inducing decisions on companies as regards future technological pathways. Existing and effective EU legislation aimed at reducing GHG emissions or implementing circularity should not be substituted by the IED. **Industry needs legal certainty when it comes to permits and to be able to freely choose the most suitable technology for their decarbonisation, independently from permit requirements.** If too prescriptive or with a too wide-ranging scope, the IED could actually hinder innovation and decarbonisation. If there are new binding limits on environmental performance based on a common process for a common product, this will hamper product and process development and as such innovation. Furthermore, binding energy consumption levels may prevent the roll-out of technologies that can achieve deep GHG abatement but require more and not less energy, such as those based on electrification or hydrogen use.

## Young steelmakers for a future-oriented European steel industry

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Investing in human capital is vital for attracting motivated and qualified people to help transform the steel industry. The steel sector is a force for good and essential for the green transition, where **young steelmakers can make a difference**. The third pillar of the Green Deal Industrial Plan is rightly about developing the skills for a just transition. However, it is **imperative for stakeholders to cooperate in providing adequate training and academic opportunities** and to ensure the EU nurtures homegrown talent whilst avoiding 'expertise leakage'. The Pact for Skills, which is part of the European Skills Agenda, is a first step into the right direction. The European steel industry is currently developing a project in the framework of the European Commission's Blueprint Skills Agenda, the so-called 'European Steel Skills Agenda and Strategy (ESSA)'. The project foresees cooperation between all relevant stakeholders to implement concrete actions to satisfy short- and medium-term skills needs, including upskilling and reskilling.

## Conclusions



The European steel industry urges the EU institutions and the Member States to endorse the aforementioned recommendations and facilitate the establishment of a **policy framework to enable the development and scaling up of low-carbon technologies in steel** production by 2030. Additionally, it is imperative to establish a level playing field for steel companies in relation to their global competitors. The steel industry's success in achieving climate neutrality will depend on collaborative efforts between policymakers, businesses and other stakeholders to overcome challenges and seize opportunities in the transition to the Net-zero Age.