IIGCC

Assessment of the European Commission's recent steel sector initiatives from the perspective of institutional investors

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Disclaimer

Summary

This paper examines recent policy initiatives from the European Commission aimed at supporting the EU steel sector's decarbonisation. It assesses both the European Steel and Metals Action Plan and the Transition Pathway for the European metals sectors against the recommendations and criteria set out in two recent IIGCC publications:

- *Policy paper: investor priorities for transitioning the European steel sector* (September 2024)
- *Principles for developing sector decarbonisation roadmaps - the investor perspective for policymakers* (February 2025)

Addressing the systemic financial risks of climate change requires real-economy action to cut greenhouse gas emissions. Institutional investors who have committed to working towards a net zero and climate resilient future - in line with their fiduciary responsibilities to their clients and beneficiaries to manage financial risk – recognise this. The clean transition can also provide important growth and investment opportunities to drive returns over the long term.

An enabling policy environment for the decarbonisation of high emitting sectors is critical. Policy advocacy is one of the key recommended action areas under IIGCC's Net Zero Investment Framework, the most widely used guide by investors to set individual targets and produce related net zero strategies and transition plans.

Responsible for around 5% of CO_2 emissions in the EU and a crucial input to various other strategic industries, the steel industry - and the policy environment surrounding it - is key in this regard.

This work aims to highlight where the Commission's documents provide useful information to institutional investors. It also identifies gaps in the documents and encourages improvements in these areas.

The Action Plan and the Transition Pathway both represent substantial, valuable work and provide helpful insights into current and anticipated future policies supporting the decarbonisation of Europe's steel sector. However, each document also contains key omissions that, unless addressed, could limit their practical impact on the decision-making of institutional investors. An overview of these is provided in the main paper, with the underpinning analytical assessment in the accompanying technical appendix.

We are grateful to Basak Yeltekin (TT International Asset Management), Mubaasil Hassan (TT International Asset Management), Ed Baker (LGPS Central) and all members of our workings groups on EU steel policy and sector decarbonisation roadmaps who contributed to the content of this publication.

Recent IIGCC work on sectoral decarbonisation and steel policy

An enabling policy environment for the decarbonisation of high emitting sectors is critical. In the June 2024 paper *Making Nationally Determined Contributions (NDCs) investable - the investor perspective*, IIGCC set out recommendations for how policymakers can better underpin economy-wide decarbonisation targets and help inform private investment decisions in the context of ambitious climate goals. A key recommendation was the development of sectoral pathways and supporting policy frameworks.

In parallel, IIGCC worked with investors to identify specific areas where better policy could most effectively unlock the transition of the steel sector in Europe. The steel industry is responsible for 7-9% of global CO_2 emissions and around 5% in the EU.[1] Steel is a crucial input to construction, energy infrastructure, machinery, and transport - all strategic sectors that support jobs and economic growth in Europe and globally. As such, investors see steel as a critical sector for economy-wide decarbonisation and for the alignment of investment portfolios with the transition. This work led to IIGCC's September 2024 policy paper *Investor priorities for transitioning the European steel sector*. One recommendation was for policymakers to "provide a transparent sector roadmap for European steel."

Building on this previous work, IIGCC published in February 2025 a paper on *Principles for developing sector decarbonisation roadmaps - the investor perspective for policymakers*. This paper elaborates IIGCC's key principles for the design of sector decarbonisation roadmaps on a jurisdiction and sector agnostic basis, for the consideration of policymakers. This is so that roadmaps, when developed, can be most effectively used by investors to inform decision-making and investment processes. If done well, the roadmaps can better allow policymakers to attract the long-term investment required to implement ambitious climate goals and other complementary policy objectives, such as clean growth and economic resilience. In brief, policymakers should develop sector decarbonisation roadmaps that:

1. Are credible and decision-useful for investors by being action-oriented and directly supporting economy-wide decarbonisation targets.
2. Provide clarity on how current and anticipated government policies will interact to support sectoral decarbonisation.
3. Are accompanied by financing mechanisms that articulate total investment needs alongside measures to de-risk and crowd-in private capital.

The policy focus of this paper aims to complement IIGCC's longstanding and continued support for institutional investors in their engagements with steelmakers and companies in their value chain. Key publications supporting this wider work are:

- *Global sector strategies: investor interventions to accelerate net zero steel* (August 2021) published by IIGCC working with other Climate Action 100+ investor network partners.
- IIGCC's *Steel purchaser framework* (June 2023, update forthcoming) to support investors engaging with steelmaker customers.
- *Engage with Steel: Primer and Tool for Engagement* (September 2025) developed by IIGCC with investor network partners, providing practical resources to support investors' engagement dialogues with steelmakers on decarbonisation.

Recent European Commission initiatives for decarbonising the steel sector

On 26 February 2025, the European Commission published the Clean Industrial Deal, which sets out a vision for a "clean, competitive and just transition" for European industries, supporting clean manufacturing and decarbonisation.[2] It positions the growth of sustainable and resilient industrial production in Europe as the best route to achieve the EU's climate goals, including an intermediate 2040 target of 90% net greenhouse gas emissions reduction formally proposed by the Commission in July 2025.[3] The Clean Industrial Deal does this by focusing on key business drivers across the economy, in particular access to affordable energy, with more detailed steps set out in an accompanying Action Plan for Affordable Energy.

As well as focusing on key cross-cutting aspects, the Commission emphasised the importance of implementing the Clean Industrial Deal in individual sectors. Here it highlighted the role of sectoral decarbonisation roadmaps, also referred to as 'sectoral transition pathways,' particularly for attracting investment. Specifically:

> *"The Clean Industrial Deal will serve as a framework for engaging in a dialogue with industries, with attention for the SMEs, to develop sectoral transition pathways. These will enable informed investment decisions and facilitate the mobilisation of more capital towards the transition, ultimately accelerating progress towards a cleaner and more competitive industrial future"* (page 22).[4]

The Commission identified a Steel and Metals Action Plan as one of the first sector specific plans it would bring forward.

The European Steel and Metals Action Plan

The Commission published the Action Plan on 19 March 2025, with the objective of strengthening the combined ferrous and non-ferrous metals sectors' competitiveness and safeguarding their future. The Commission says that the plan builds on the high-level steel dialogue convened by President von der Leyen on 4 March 2025 and a wider series of stakeholder consultations. The Action Plan looks to provide immediate relief to the metals industries for the main sector-specific issues they are facing while also seeking to reassure them in their decarbonisation pathways and investment decisions. It is focused on the short- to medium-term, setting out concrete measures the Commission will take in 2025-2027. Almost all actions are frontloaded for 2025.

The Action Plan is built around six pillars: ensuring abundant and affordable clean energy; preventing carbon leakage; promoting and protecting European industrial capacities (including through trade measures); promoting circularity for metals; defending quality industrial jobs; and de-risking through lead markets and support to investments.

The Transition Pathway for the European metals sectors

The Action Plan was accompanied by a Transition Pathway for the European metals sectors. The Commission describes this as providing "additional background and bottom-up analysis of the needs and challenges of the metals industries and the views expressed by different stakeholders."[5] Like the Action Plan, the Transition Pathway covers the ferrous and non-ferrous metals sectors together.

In addition to supporting the Clean Industrial Deal and the Steel and Metals Action Plan, the Transition Pathway also seeks to align with the updated EU industrial strategy from 2021. As such, the pathway follows a blueprint with several key building blocks developed by the EU's Industrial Forum in 2022.[6] These are: sustainable competitiveness; regulation and public governance; support to research & innovation, production techniques and technological solutions; investments and funding; access to primary and secondary raw materials; infrastructure; skills; social dimension.[7]

Underneath these, the transition pathway identifies several actions and conditions to drive the green and digital transitions and to enhance resilience in the metals industries. In all it provides a list of more than 60 actions, grouped under 15 topics.

The development of the Transition Pathway was overseen by the European Commission and led by Eurofer and Eurometaux, respectively the European industry associations for the ferrous and non-ferrous metals sectors. Other industry stakeholders, a selection of NGOs, the European Commission and EU countries also provided input.

Although the transition pathway is hosted on the European Commission's website, the document states that it is not an official position of policymakers, nor does it have the endorsement of contributing stakeholder groups.[8]

How do the Action Plan and the Transition Pathway compare to IIGCC's recommendations for policies to support investments in decarbonising the EU steel sector?

The recommendations in IIGCC's paper on *Investor priorities for transitioning the European steel sector* fall into four areas:

A. Improve circularity in the steel value chain

B. Develop a clean industrial strategy that delivers clean power at a low price and accounts for the steel sector's capital-intensity

C. Stimulate demand for green steel

D. Manage human capital and the workforce

The priorities set out in both the Action Plan and the Transition Pathway broadly align with these thematic areas. The Action Plan includes clearer concrete actions while the Transition Pathway has some useful signalling from industry for relevant policies. Both documents require further clarity on implementation and financing mechanisms.[9]

Improve circularity in the steel value chain

Steel and Metals Action Plan: One of the Action Plan's pillars is 'promoting circularity for metals' and the measures proposed align well with IIGCC's recommendations. Stimulating demand for high-quality recycled steel by exploring targets for recycled content in key sectors is welcome – as is the recognition that this could encourage upfront investment by the recycling industry in processes to better address copper contamination in steel scrap.

There is also a focus on securing a stable scrap supply within the EU whilst ensuring a competitive environment for European recyclers. This is an important balance to strike, especially as it could be the lower demand for scrap in Europe that limits its use in domestic production, rather than a shortage of supply.

Transition Pathway for the European metals sectors: The Transition Pathway positively places similar emphasis on circularity as a key decarbonisation lever. It has a particular focus on the availability and supply of scrap metal in its section on 'access to primary and secondary raw materials'. However, the implication that restricting exports of steel scrap from the EU could be a solution risks being counterproductive, with unintended consequences for European recyclers – its inherent trade-offs need careful examination.

Develop a clean industrial strategy that delivers clean power at a low price and accounts for the steel sector's capital intensity

Steel and Metals Action Plan: Taken together with the Clean Industrial Deal and the Affordable Energy Action Plan, the Steel and Metals Action Plan is a helpful step forward. The Commission's emphasis on expanding renewable energy infrastructure, supporting Contracts for Difference (CfDs), Power Purchase Agreements (PPA) and improved grid connections are all crucial. The clear recognition that electrification, both direct and indirect via low-carbon hydrogen, offers the most promising routes to decarbonisation is welcome and overdue.

Additional impetus should be given to support for partnerships in key industrial clusters. These can reduce risk and support a faster shift to green steel manufacturing. For instance, the HYBRIT partnership in Sweden is an early example of bringing together renewable energy, hydrogen production and ore inputs in an integrated way to make a business case for virgin green steel manufacturing.

The Action Plan is more limited when it comes to investment in what is a capital-intense industry. Whilst some mechanisms, such as carbon contracts for difference, are mentioned, the implementation of clearer financial incentives is needed to provide stronger signals to investors and ensure an effective transition to a sustainable steel industry.

Transition Pathway for the European metals sectors: The placement of the Transition Pathway under the 2021 updated EU industrial strategy means its links to more recent and relevant Commission initiatives are unclear. Nevertheless, the Transition Pathway places strong emphasis on the need to bring down energy costs. This is tied closely under the 'sustainable competitiveness pillar' to actions required in other policy areas, most notably trade policy and measures to address potential carbon leakage.

The 'investment' pillar usefully considers the capital intensity of the steel sector as well as the likely increases in operational expenditure (opex) with the shift to cleaner production methods. However, little consideration is given to the potential for this opex to fall, potentially significantly, over the medium to long-term.

Stimulate demand for green steel

Steel and Metals Action Plan: The Action Plan is clear that robust demand-pull policies are indispensable for scaling European green-steel projects. A clear strength is its inclusion of clear near-term EU-level actions, such as plans to introduce public procurement criteria and recycled steel scrap content requirements for key off-taking sectors. Timely implementation of these is essential. The proposal for a voluntary label on the carbon intensity of industrial products could be useful if properly designed and straightforward to implement. Focusing on a single metric, such as carbon emissions, can lead to unintended consequences; life-cycle assessments and similar methods support a more comprehensive evaluation.

Transition Pathway for the European metals sectors: The Transition Pathway also emphasises the importance of policies to develop lead markets for greener steel products under its 'sustainable competitiveness' pillar. It lays out a broader menu of options – standards, regulations, fiscal tools, and public procurement – and as such is less targeted. However, it correctly emphasises the importance of short-term action, including through regulation.

Manage human capital and the workforce

Steel and Metals Action Plan: The Action Plan highlights the importance of protecting quality industrial jobs and links various EU-level initiatives to support them. However, it lacks details on implementation. A more comprehensive workforce transition framework, developed in close consultation with social partners, communities and companies, would be more effective.

Transition Pathway for the European metals sectors: While the Transition Pathway refers to the importance of a 'just transition' under its 'social dimension' pillar, the section is comparatively short with limited concrete proposals.

Can the Action Plan or Transition Pathway function as effective sector decarbonisation roadmaps for institutional investors?

To complement the analysis above, and building on its earlier call for a transparent sector roadmap for European steel, IIGCC assessed both the Action Plan and the Transition Pathway against the investor-led principles set out in its February 2025 paper on sector decarbonisation roadmaps. Given IIGCC's work on the decarbonisation of European steel, we have focused the analysis on this sector and not assessed aspects specific to the non-ferrous metals industries.

This assessment is intended to be constructive. It seeks to highlight where the documents provide institutional investors with useful information, to identify where they contain gaps and to encourage improvements in these areas. It is hoped that these findings can be used to inform future sector decarbonisation roadmaps for steel and other sectors in the EU and beyond.

A summary of this analysis is below, with the underlying detailed assessment included in the tables in the appendix.

Ultimately, both documents represent a significant amount of useful work and provide much helpful information. However, both also contain important omissions that will limit their practical impact on institutional investors' decision-making.

Are the documents owned, or co-owned, by policymakers?

IIGCC defines sector decarbonisation roadmaps as long-term strategic plans developed by policymakers to support the decarbonisation of material sectors in a jurisdiction's economy. The ownership, or at least co-ownership, of these roadmaps by policymakers is critical for increasing their credibility and the certainty they can provide investors.

Steel and Metals Action Plan: As it is a formal communication, the Action Plan is clearly official European Commission policy.

Transition Pathway for the European metals sectors: While the pathway has been developed through a process overseen by the European Commission and is hosted on its website, the document makes clear it is not officially endorsed by policymakers. This significantly affects how investors will view the pathway. Ultimately, it provides helpful and detailed contextual information but no additional clarity or certainty. It will thus have limited impact on investors' decision-making.

Are they credible and decision-useful for investors by being action-orientated and directly supporting economy-wide decarbonisation targets?

To effectively enable the deployment of private capital in support of decarbonisation, sector roadmaps should directly support economy-wide national decarbonisation targets. They should be evidence-based, economically credible and provide information that is decision-useful for investors.

Action Plan: It has clear short-term actions in highly relevant areas, all of which are owned by the Commission. It also considers the interaction between steel and other sectors, setting out key interdependencies. However, there is scarce reference to potential trade-offs.

The links to economy-wide decarbonisation goals are insufficient, with no references made to the EU's legally binding targets for 2030 and 2050, nor the Commission's 2040 proposal. There are no references to evidence-based emissions reduction trajectories for the steel sector nor to decarbonisation milestones. It does not cover all material upstream and downstream greenhouse gas emissions e.g. methane emissions from the mining of metallurgical coal for primary steel production are significant and a notable omission.[10]

Transition Pathway: A detailed action-oriented roadmap is a key part of the pathway. However, there are no clear accountability mechanisms or processes for monitoring progress. Reference is made to the 2030 and 2050 legally binding EU climate targets, but the document includes only high-level information on how the European metals sectors may decarbonise and lacks clear associated emissions reduction trajectories and milestones. As with the Action Plan, it does not cover all material upstream and downstream greenhouse gas emissions, with upstream metallurgical coal mining methane emissions a clear gap.

Do they provide clarity on how current and anticipated government policies will interact to support sectoral decarbonisation?

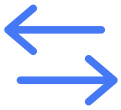
Roadmaps should set out the policy initiatives being taken to decarbonise a sector and how these interact with the wider policy environment. They should also explain how these are expected to evolve as the sector transitions, and vice versa.

Action Plan: It provides a partial overview of the policy mix impacting the steel sector's decarbonisation. For the current barriers and short-term future policies identified, it does well at setting out how they relate to key decarbonisation levers. It also devotes significant analysis to the wider macroeconomic and international context for the steel sector, which is highly relevant.

While the action plan does not provide specific commentary on the maturity of relevant technologies and their capacity to be scaled, it does send clear signals that policymakers see the most efficient decarbonisation pathways for the steel sector to rely on electrification, either directly for secondary production or indirectly via hydrogen produced from electrolysis for primary production.

The nature of the action plan means it does not provide significant longer-term signalling. There is a notable omission in the very limited references made to the EU Emissions Trading System (ETS). This is despite it being one of the main policy mechanisms pushing the European steel sector's future decarbonisation as the industry's historic free allocation of allowances is phased out while the EU carbon border adjustment mechanism is introduced, gradually subjecting the steel sector to the ETS carbon price.

Trade policy is addressed at length, reflecting the importance of globalised trade for steel and the impact of ongoing instability in the international trade system. There are references to trade measures such as "melted and poured" origin tracing and the more proactive use of EU trade defence tools, including earlier interventions based on threats rather than material injury. The document also refers to trade measures to ensure sufficient availability of scrap; however, it does not allude to any potential negative impacts from export fees or export duties on scrap, which would likely be key trade-offs.



Transition Pathway: The document provides a good overview of the wide range of EU-level policies impacting the steel sector's decarbonisation and broader competitiveness. It also provides some consideration of how they interact. Particular attention is given to current and expected future energy, climate, industrial and trade policies. It does well in explaining how policies support key decarbonisation levers (e.g. electrification, clean hydrogen, circular economy) and how these could be strengthened, with accompanying timelines.

However, there is an important gap in relation to how policies support the scaling of relevant decarbonisation technologies. The document notes that "some of the metals sectors, e.g. aluminium and copper, have published sectorial technology roadmaps for decarbonisation and increased circularity, other sectors should publish newly prepared or updated sectorial technology roadmaps" (page 59).[11] The lack of such a roadmap for the steel sector is an omission that should be addressed. The Commission could directly support or co-develop a steel-specific technology roadmap covering technology maturity and sequencing, particularly for hydrogen-based DRI and electrification. This could make a difference to how institutional investors assess timing and transition risk for the sector.

The document suggests recognising ferrous metal waste as a strategic secondary raw material and adopting export measures; however, again there is no discussion of potential unintended consequences from these measures.

Are they accompanied by financing mechanisms that articulate total investment needs alongside measures to de-risk and crowd-in private capital?

Sector decarbonisation roadmaps should estimate the total investment needed to decarbonise a given sector and close financing gaps. They should also provide transparency over existing and planned financing mechanisms to de-risk and catalyse private investment flows.

To be most practically usable for investors, they should show how policy goals line up with available funding instruments and indicate where institutional capital can best play a role in enabling the sector's decarbonisation.

Action Plan: It includes high-level estimates for annual financing needs to decarbonise the steel industry, broken down by expected capital expenditure (capex) and opex until 2030. The respective roles of private and public investment are not elaborated. There is also no breakdown of investment need by sub-sector or technology, nor a mapping of investment needs to the most relevant sources of finance.

Transition Pathway: It does not contain a complete assessment or estimate of funding required to decarbonise the European steel sector. There is a limited and high-level estimate of investment needs by 2030 to decarbonise steel production processes, broken down by capex and opex. But this seems to only cover primary production and therefore omits the significant percentage (c. 45%) of European crude steel making that is done through the secondary route.[12] No estimates are provided beyond 2030 and there is no breakdown between public and private investment needs.

There is some discussion on the investment challenges for the broader European metals sectors, including upstream mining (e.g. high upfront costs and long development cycles for new technologies; high opex for low and near-zero carbon production processes; risks posed by an uneven international playing field). However, there is little detail on accompanying policy or financing mechanisms to address these barriers.

Conclusion

The European Steel and Metals Action Plan and the Transition Pathway for the European metals sectors both provide useful information about the policies needed to support the decarbonisation of the EU steel sector and how these are likely to evolve in the near term. IIGCC welcomes these important efforts. However, this paper has identified several areas requiring improvement to enhance their relevance and usefulness for institutional investors seeking to support Europe's clean transition.

The Action Plan, as an official Commission communication, provides short-term, actionable measures that align well with investor policy priorities for the steel sector's transition, particularly in promoting circularity and demand-pull policies. However, it lacks longer-term signals, clear emissions trajectories for the sector, and supporting financing mechanisms.

The Transition Pathway reflects broader stakeholder input and a more detailed policy landscape but suffers from limited official endorsement, reducing its utility to investors. While it outlines numerous actions and emphasises competitiveness and energy costs, it does not include key elements including monitoring frameworks, sector-specific technology roadmaps, and detail on investment needs and flows.

Both documents fall short in considering key upstream methane emissions, setting clear decarbonisation milestones, creating quality industrial jobs and mapping investment requirements to likely sources. They also omit mechanisms for tracking investment flows and engaging stakeholders on financing opportunities.

To effectively mobilise institutional capital and support the EU's climate and industrial competitiveness goals, future policy documents should provide concrete steps for policy implementation, define transparent financing strategies, and strengthen alignment with economy-wide decarbonisation targets.

The publication by the Commission of a full sector decarbonisation roadmap for the steel industry, aligned with the investor-led principles developed by IIGCC, would be an important next step that IIGCC and its investor members stand ready to support.

Appendix: Detailed analysis of the Steel and Metals Action Plan and the Transition Pathway for the European metals sectors against IIGCC's principles for sector decarbonisation roadmaps

Key

- Document is aligned with the relevant principle
- Document is partially aligned with the relevant principle
- Document is not aligned with the relevant principle

Ownership

Principle	Steel and Metals Action Plan		Transition pathway for the European metals sectors	
	Rating	Commentary	Rating	Commentary
Developed or co-owned by policymakers		The action plan is a formal communication from the European Commission, making it official Commission policy.		While the pathway has been developed through a process overseen by the European Commission and is hosted on its website, the document makes clear it is not officially endorsed by policymakers.

Credible and decision useful

Principle	Steel and Metals Action Plan		Transition pathway for the European metals sectors	
	Rating	Commentary	Rating	Commentary
Action-oriented, with clear actions for relevant stakeholders that can be transparently monitored.		The action plan clearly articulates and summarises the key actions the Commission commits to taking under each of the six pillars of the action plan. Each action also has a clear timeframe. The nature of the document means that the actions only apply to the Commission, rather than to wider stakeholders.		A detailed action-oriented roadmap, informed by discussions with stakeholders, and covering eight building blocks, is a key component of the pathway. Actions include timelines for implementation (short-, medium- and long-term) and reference the main actors responsible for implementation. The importance of continued multi-stakeholder collaboration to implement the actions in the transition pathway is mentioned. The need to monitor progress, and some high-level suggestions of fora through which this could be done are also included. However, there are not yet clear mechanisms for monitoring progress against the actions.
Support economy-wide emissions reduction goals set out in a country's NDC and/ or relevant national legislation, in line with the Paris Agreement		The action plan says the European metals industries are committed to and contributing towards the EU's climate and environmental ambition. However, no reference is made to the EU's legally binding 2030 and 2050 climate targets.		Identifies the 2030 and 2050 legally binding EU climate targets and the EU's zero-pollution ambition as 'the next important steps for the metals industry's emission-reduction efforts, as part of the climate and environmental component of the Green Deal.' However, the document includes only high-level forward-looking information on how the European metals sectors may decarbonise and lacks clear associated emissions reductions targets and milestones.
Prioritise highest impact sectors		The action plan notes the metals industry represented 8.1% of total EU GHG emissions in 2022. The action plan does not provide a sub-breakdown for emissions for the individual sectors themselves, despite these figures being readily available. For instance, the steel sector represents c. 5% of EU emissions.		The metals sectors are identified as the largest industrial emitter of CO_2 in the EU, representing 8.1% of total EU emissions in 2022. The fact that the EU will not meet its climate targets unless the metals sectors decarbonise is clearly noted. However, the document does not provide a sub-breakdown for emissions for the individual sectors themselves, despite these figures being readily available. For instance, the steel sector represents c. 5% of EU emissions and non-ferrous metals c. 3%. These figures are high enough for the individual sectors to warrant separate pathways.
Based on evidenced-based emissions reduction trajectories		No reference is made to evidence-based emissions reduction trajectories.		It does not include any anticipated emissions trajectory for the steel sector in any scenario. References to broader evidenced-based emissions reduction trajectories (e.g. IEA's net zero emissions scenario by 2050) or other pathways are also lacking.

Cover emissions for all material greenhouse gases		No specific greenhouse gases are mentioned in the action plan. There are frequent references to 'carbon', 'low carbon' and 'decarbonisation' which are clear references to reducing CO_2 emissions. For the steel sector, there is a material omission with the failure to acknowledge or account for upstream methane emissions from the mining of metallurgical coal, a key input material for primary steel produced through the traditional BF-BOF route.		No commentary on non-CO2 emissions pathways and associated measures to reduce these emissions. For the steel sector, there is a material omission in this regard with the failure to acknowledge or account for upstream methane emissions from the mining of metallurgical coal, a key input material for primary steel produced through the traditional BF-BOF route.
Cover relevant upstream and downstream emissions		There is a reference to the Commission's work developing comprehensive lifecycle assessments to improve the sustainability of products. There are several references to downstream industries and products but none to those upstream. This is relevant for methane in the context of primary steel production, as mentioned above.		Emphasises the relevance of life-cycle emissions accounting, with several of the recommended actions reflecting this. However, the failure to acknowledge or account for upstream methane emissions from the mining of metallurgical coal when it comes to the steel sector is significant.
Set a clear deadline for the relevant sector's decarbonisation, underpinned by interim targets and milestones		No detail on sector-specific emissions reduction targets or a clear deadline for the sector's decarbonisation. The action plan is clear it is only focused on the short to medium term i.e. up until 2030.		No detail on sector-specific emissions reduction targets or a clear deadline for the sector's decarbonisation. However, there is discussion of the EU emissions trading system (ETS) and how the declining emissions cap for all sectors covered will have implications for the steel industry, particularly as the free allocation of allowances is phased out with the gradual introduction of the EU's carbon boarder adjustment mechanism (CBAM). The impact of the cap's 62% reduction (vs 2005 levels) by 2030 are highlighted.
Consider the interactions between sectors		The action plan sets out the steel sector's interactions with key other sectors, notably energy as well as important off-taking industries like automotive and construction.		Clearly sets out the reliance on the supply, availability and price of clean energy - both through direct electrification and clean hydrogen - for decarbonising the steel sector. The document also identifies current bottlenecks in this area, such as issues relating to permitting and grid connections. Potential competition with other sectors for the clean energy that is available, both electricity and hydrogen, is also identified as a key interdependency and potential trade-off. This is particularly relevant given the projected increases in clean energy demand from other energy intensive industries as they also look to decarbonise. Potential cross-sector synergies, e.g. industrial co-location in clusters, are also highlighted. Steel's role as an important input into other transition technologies and sectors is strongly emphasised.

Set out key interdependencies and potential trade-offs		The action plan does well at summarising the key interdependencies for the steel sector's decarbonisation, with a strong focus on the need for access to clean and affordable energy. How the sector's decarbonisation is closely linked to the willingness of off-taking sectors to pay a green premium, plus how this can be overcome, is also set out. The exposure of the sector to the international trade system - and the challenges this can pose for decarbonisation - are addressed clearly. However, there is scarce reference in the document to potential trade-offs.		**Interdependencies** The document provides a comprehensive overview of key interdependencies and the associated complexities across eight 'building blocks' for the transition. However, these are not all subject to the same level of analysis. The first building block on ' sustainable competitiveness' provides investors with valuable detail on the sector's interdependence with key aspects of the energy transition (e.g. electricity markets, long-term contracts, the roll out of decarbonised generation capacity, as well as hydrogen and infrastructure). The need to create demand for greener steel products through a whole value-chain approach is also highlighted in a useful way, with several key upstream and downstream sectors identified. The possibility of CCU/S technology as an enabler of climate neutrality is included, albeit with much less detailed analysis than energy-related enablers - particularly when it comes to likely development and deployment costs. The steel sector's interdependency with both the mining industry (inside and outside of Europe) and the recycling industry (inside Europe) is usefully analysed in section five on 'access to primary and secondary raw materials'. **Trade-offs** The document also sets out some likely trade-offs, albeit with important omissions. The document is clear that industrial demand for clean energy, including hydrogen, will continue to exceed supply for the foreseeable future. The document starts to address what this may mean for trade-offs between potential different use cases, both within and between energy intensive sectors. The document explains the three technological pathways currently being pursued for reducing the EU steel sector's emissions: 'smart carbon usage', 'deep emissions reduction' and 'circular economy'. However, a significant omission is that it does not examine the trade-offs between them nor assess their relevant merits/challenges in transitioning the sector to net zero from either commercial or an emissions perspective.
Account transparently for a sector's 'locked-in' future emissions		There is no reference to 'locked-in' future emissions due to the lifespan of current production assets.		No detail on locked-in emissions, including decommissioning or transition of coal-based primary production assets and associated timelines.

Informed by stakeholder dialogue		The action plan builds on the Steel dialogue convened by the Commission President on 4 March 2025 and a wider series of consultations. However, the consultation period and breadth were significantly limited.		The document says there was extensive engagement with European metals sector stakeholders, and transparency actions were recommended by stakeholders. However, unlike with some of the other EU industrial ecosystem transition pathways, there was no formal public consultation.
Reviewed on a regular basis and updated as necessary		The Commission says it will continuously monitor the situation in the sector, its resilience and ongoing decarbonisation and of the possible policy adjustments needed.		The pathway states that it may be updated to take account of new developments and the evolution of EU legislation. While there are helpful suggestions in the 'next steps and pathway implementation' section of the report on how progress against the pathway can be progressed and monitored, there are no concrete details on how this will be done.
Provide transparency on underpinning data		All data cited is clearly sourced.		The document lacks granular detail of underpinning data on emissions pathways, technology deployment, total investment and financing needs.

Policy mechanisms

Principle	Steel and Metals Action Plan		Transition pathway for the European metals sectors	
	Rating	Commentary	Rating	Commentary
Overview of current anticipated policy mix impacting the sector's decarbonisation, including how policies support key decarbonisation levers.		The action plan provides a partial overview of the policy mix impacting the steel sector's decarbonisation. For the current and potential future policies identified it does well at setting out how they relate to key decarbonisation levers. However, there is a notable omission in the very limited references made to the EU Emissions Trading System (ETS), despite it being one of the main policy mechanisms impacting industrial decarbonisation in Europe.		The document provides a good overview of the wide range of EU-level policies impacting the steel sector's decarbonisation and broader competitiveness. It also provides some consideration of how they interact. Particular attention is given to current and expected future energy, climate, industrial and trade policies. The document does well in explaining how policies support key decarbonisation levers (e.g. electrification, clean hydrogen, circular economy) and how these could be strengthened, with accompanying timelines.
Overview of policy, regulatory market barriers		The action plan provides an overview of the policy, regulatory and market barriers impacting the sector's decarbonisation.		There is commentary on policy, regulatory and market barriers to the steel sector's decarbonisation. There are suggested actions to address these, with specific reference to the steel sector.
Details on the fiscal and market incentives and policies that will make decarbonisation cost-competitive		The action plan sets out clearly the incentives and policies that the Commission feels it can use to make the steel sector's decarbonisation cost-competitive and how it intends to start making greater use of these in the near term.		The document provides detail on the fiscal and market incentives and policies that will make decarbonisation cost-competitive - primarily from the perspective of the steel industry. A wide number of current and future policies are cited in this context, with a whole section devoted to 'regulation and public governance'.
Assessments of the maturity of relevant technologies and their capacity to be scaled		The action plan does not provide specific commentary on the maturity of relevant technologies and their capacity to be scaled. However, it does send clear signals as to what policymakers see as the most efficient decarbonisation pathways for the steel sector: "Direct electrification remains the most efficient pathway for decarbonising several forms of steel and metals production, while others will depend on indirect electrification methods, such as hydrogen produced from electrolysis…" (page 4) "Direct reduction using hydrogen is the most promising option to decarbonise primary steel production…" (page 6)		The document's section on 'support to R&I, production techniques and technological solutions' features a series of actions to support the industry's technological transition, grouped by Technological Readiness Levels that assess the maturity of relevant technologies. However, these apply across all European metals sectors, rather than focusing specifically on steel. As such the more general nature of these recommendations limits their utility to investors. The document notes that "some of the metals sectors, e.g. aluminium and copper have already published sectorial technology roadmaps for decarbonisation and increased circularity, other sectors should publish newly prepared or updated sectorial technology roadmaps" (page 59). The lack of such a roadmap for the steel sector is an omission that should be addressed. This could provide further helpful information for investors in the context of the three technological pathways the document says are currently being pursued for reducing the EU steel sector's emissions: 'smart carbon usage', 'deep emissions reduction' and 'circular economy'.

Phase-out dates for environmentally harmful policies and incentives		There is no mention of phase-out dates for environmentally harmful policies and incentives.		Minimal commentary on the phase out of environmentally harmful policies and incentives. The phase out of the free allocation of ETS allowances as CBAM is brought in is presented purely in the context of needing to limit carbon leakage and the potential risks posed to incumbent European steelmakers.
Consideration of wider macroeconomic context		The action plan devotes significant analysis to the wider macroeconomic context for the steel sector. Indeed, the plan is presented as a direct response to the wider challenges the sector is facing including high energy costs, exposure to an unlevel playing field in international competition, high investment needs for decarbonisation and perceived regulatory burden.		The document thoroughly considers the wider macroeconomic context, with assessments and recommendations made across the steel value chain. The importance of international trade - and how it interacts with European climate policy - is a point of particular emphasis, both in terms of exports and imports. The challenges of global overcapacity and potential carbon leakage are addressed in detail.
Quantification of anticipated impact of policies on sectoral decarbonisation		No quantitative assessments of the impact of current or expected future EU policy initiatives on technology deployment or emissions reductions.		No quantitative assessments of the impact of current or expected future EU policy initiatives on technology deployment or emissions reductions.
Transparent explanations of policy processes		Overview of relevant policy initiatives provides some detail on governance and oversight of these policies.		Overview of relevant policy initiatives does not provide detail on governance and oversight of these policies.
Transparency over data underpinning policy development		All data cited is clearly sourced.		No clear information provided about the data underpinning policy development, for example no assessments on the quantitative costs and benefits of decarbonisation policies and the assumed role of marked-led forces.

Financing mechanisms

Principle	Steel and Metals Action Plan		Transition pathway for the European metals sectors	
	Rating	Commentary	Rating	Commentary
Assessment of total public and private investment needs		The action plan includes high-level estimates for annual financing needs to decarbonise the steel industry, broken down by expected capex and opex until 2030. The respective roles of private and public investment are not elaborated.		No complete assessment or estimate of funding required to decarbonise the sector. There is a limited and high-level estimate of investment needs by 2030 to decarbonise steel production processes, broken down by capex and opex. But this seems to only cover primary production and therefore omits the significant percentage of European steel making that is done through the secondary route. No estimates provided beyond 2030. No breakdown between public and private investment needs.
Breakdown of investment need by sub-sector and technology		There is no breakdown of investment need by sub-sector and technology.		No breakdown of investment need by sub-sector and technology.
Prioritisation of investments based on impact on emissions reductions		The action plan is unclear about how the impact on emissions reductions will inform the prioritisation of investments.		No prioritisation of investment requirements based on impact in emissions reductions.
Mapping of investment needs to most relevant sources of finance		There is no mapping of investment needs to the most relevant sources of finance.		No mapping of investment needs to the most relevant sources of finance.
Transparency over relevant public and private financial instruments to support decarbonisation		The action plan sets out clearly the main instruments the Commission intends to use to derisk high investment costs projects at both the innovation and scale up stages. It also provides helpful detail on the financial mechanisms it intends to use to support electrification and low-carbon hydrogen development.		There is some discussion on the investment challenges for the broader European metals sectors, including upstream mining (e.g. high upfront costs (capex) and long development cycles for new technologies; high opex for low and near zero carbon production processes; risks posed by an uneven international playing field). However, there is little detail on accompanying policy or financing mechanisms to address these barriers. Some discussion of financial instruments and mechanisms that can support decarbonisation (e.g. Member States better enabling the sale of fossil-free electricity covered by a public contract for difference to selected industrial customers through power purchase agreements) and public funding opportunities. However, with some exceptions, these lack specificity.
Tracking of investment flows		There is no reference to tracking investment flows.		No reference to tracking investment flows to monitor progress and identify financing gaps.
Engagement with stakeholders to identify investment opportunities and relevant sources of finance		There is no reference to engagement with stakeholders to identify investment opportunities and relevant sources of finance.		Sets out a series of actions to support increased investment towards the steel sector's decarbonisation and improved access to public and private funding, as identified by stakeholders. However, actions are relatively high-level and unquantified, and it is unclear whether there are mechanisms in place for ongoing dialogue.

Endnotes

1 Iron and Steel Technology Roadmap (IEA)

2 For a more detailed assessment of the Clean Industrial Deal see: New Clean Industrial Deal chimes with investor recommendations (IIGCC).

3 Proposal for a 2040 EU climate target (European Commission)

4 The Clean Industrial Deal: A joint roadmap for competitiveness and decarbonisation (European Commission).

5 A European Steel and Metals Action Plan (European Commission).

6 Blueprint for the development of transition pathways (Industrial Forum, Task Force 2 - support to the development of transition pathways).

7 The 'access to primary and secondary raw materials' building block was not defined by the Industrial Forum but was added to the transition pathway for the European metals sectors based on stakeholder input.

8 The disclaimer on page 4 reads: "This document does not constitute the official position of the European Commission, nor does it prejudge any such position. This document reflects the results of a co-creation process with stakeholders active in the metals ecosystem. The recommended actions do not necessarily represent the position or endorsement of all stakeholder groups nor the position of individual Member States or the European Commission. This document is without prejudice to any future initiatives. The actions presented in this document described ambitions and desired objectives for the transition."

9 This section of the paper builds on an earlier initial assessment done in April 2025: Transitioning the European steel sector: Assessing the new Action Plan against investor priorities (IIGCC).

10 The EU's steel industry and its methane problem (Ember)

11 Net-Zero by 2050: Science-Based Decarbonisation Pathways for the European Aluminium Industry (European Aluminium); Copper the Pathway to Net Zero Regional Focus: Europe (European Copper Institute).

12 Latest data from 2023 – European steel in figures 2024 (Eurofer).

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