CONTRIBUTION TO THE CONSULTATION ON 2030 CLIMATE & ENERGY POLICY

- **Part 1 - Section 1: Climate ambition for 2030 (Questions 1.1, 1.2, 1.3)**

The level of the target should be set on the basis of a thorough impact assessment that takes into account and balances the following elements:

- The recent crisis due to the COVID outbreak and its impact on financial ability of EU industry and society to make the investments required by the target;
- The level of climate ambition by third countries and its effective impact on regulatory costs for extra EU competitors;
- The enabling conditions, including the availability of competitive low carbon energy;
- The long-time horizon of investment cycles and elevated risks associated with these investments in industry;
- The non-linear trajectory of disruptive breakthrough technologies needed for the climate-neutrality objective, which require sufficient time to be developed, upscaled and commercialised;
- The implications of the negotiations on Brexit on the level of the effort required by the EU and its distribution among member states.

With regards the opportunities listed in the question 1.2, from an environmental viewpoint, the impact of a higher EU 2030 target in isolation on worldwide emissions is very limited, due to the narrow size in a global perspective. For the same reason, also the impact on EU adaptation costs would be limited. The success of EU climate leadership does not rely only on its level of ambition (which is already now not matched by any other large trading partner) but mainly on its ability to demonstrate that it is possible to combine environmental sustainability with economic growth and social acceptance as well as on the ability to effectively reduce GHG emissions worldwide. If the EU target is increased in isolation and EU's competitiveness is undermined, worldwide GHG emissions would increase instead of decreasing due to the shift of production to less stringently regulated areas, longer logistics/shipment and less possibility for cooperation, research and development over whole value chains in the EU.

The economic benefits of a higher EU target (green jobs, first mover advantage, energy security) are at best uncertain, as they depend on the enabling policy framework, including the ability to avoid carbon, investment and job leakage. Furthermore, at its best, this might create lead markets for climate friendly products, provided that they are defined and regulated on the basis of their whole lifecycle by standardized lifecycle assessment, regardless of their manufacturing place.Considering the limited remaining time left by 2030, it will be particularly challenging to develop and implement a supportive regulatory framework.

As a whole, the challenges appear more tangible and sizeable, in particular in the short timeframe by 2030, while opportunities are more uncertain and could materialise more prominently in longer term, provided that the enabling conditions are put in place.

- **Part 1 – Section 2 Sectoral action and potential to reduce greenhouse gas emissions by 2030**

Question 2.1

All sectors of EU economy need to contribute fairly to the overall climate ambition. So far, ETS sectors have reduced emissions at a much faster path than non ETS sectors. As a result of that, it should be noted that the share of ETS emissions have dropped to around 40% of total EU emissions; hence, higher ambition, if agreed, requires a bigger effort for non ETS sectors. Already the current target of reducing emissions by 40% compared to 1990 entails a much larger effort on ETS sectors (-43% vs. 2005) in comparison to non ETS sectors (-30% vs. 2005). Taking into account these historical trends as well as the need to address intertemporal efficiency of emissions reduction, it is important to focus any

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possible additional measures on non ETS sectors like buildings and transport. As the energy sector plays a major role also for the rest of the economy, continued effort should be secured, while ensuring energy affordability. Furthermore, large emitting sectors as well as sectors with mitigation potentials such as agriculture should also step up their contribution.

On the other hand, long investment cycles, the level of risks of investments as well as carbon leakage exposure of energy intensive industries exposed to global competition such as the steel industry should be taken into account. This should result in a step-wise transition, which would avoid overloading the supply in climate friendly energy and other input materials.

The steel sector reduced emissions by around 26% in the period 1990-2015. The abatement potential by 2030 on one side is linked to the possibility of increasing further energy efficiency (which is very limited, since the sector is very close to the technological limits) and on the other side relies on the possibility of developing and implementing the first industrial scale demonstrators of breakthrough technologies (smart carbon usage and direct carbon avoidance). This potential depends on the timely development of the necessary enabling conditions (funding support, access to competitive low carbon energy and supportive regulatory framework), which are not yet in place.

Question 2.2

The contribution of energy efficiency could be increased in sectors with large untapped potential such as buildings, while penetration of all low carbon energy sources, including renewables and nuclear, could have spill over effects across the society, provided that energy security and affordability are preserved. Accelerating the investments in pathways such as CCU and climate neutral energy carriers (H_2, bio-methane, etc.) would help significantly the transition of energy intensive sectors such as steel.

Questions 2.3 and 2.4

With regards to possible higher targets on renewables and energy efficiency, these need to take into account the comments above on the level of climate ambition as well as their impact on the overall cost efficiency and in addition on the carbon leakage risk of sectors exposed to international competition such as steel. If a higher target is agreed and consequently energy efficiency and renewable targets are increased, their direct and indirect impact (e.g. higher costs of electricity, energy efficiency obligations) on these sectors should be avoided. Finally, it should be noted that increased RES target affects the member states' exclusive competence on the energy mix.

Questions 2.5.1 and 2.5.2

The transition of the energy sector, including the decisions on the role of fossil fuels, will have a major impact on the overall cost effectiveness of the transition. If the objective is to reduce emissions cost effectively, all options that contribute to the environmental targets should be preserved. Excluding some alternatives would increase the overall costs of the transition.

Question 2.7

As mentioned in the previous questions, the contribution of industry to possibly higher targets needs to take into account the long investment cycles as well as the carbon leakage risk of sectors exposed to global competition such as steel. Furthermore, it should be noted that if financial resources are allocated on short term measures (e.g. energy efficiency investments), these will interact with the overall financial ability of investing in technologies that have a larger potential beyond 2030, such as smart carbon usage and direct carbon avoidance pathways. For these solutions to succeed, the enabling conditions (funding support, access to competitive low carbon energy and supportive regulatory framework) need to be developed as soon as possible.

Question 2.8 (mobility)

Until now, car and van CO_2 regulations have focused solely on tailpipe emissions that occur during the use phase of the vehicle. Applying a more holistic approach based on full life cycle assessment, the huge potential for the reduction of CO_2 emissions outside the pure boundaries of the automotive industry could be untapped. For instance, by providing OEMs CO_2 credits for the use of 'green' (pre-) materials.

The application of a lifecycle CO2 credit, including materials, is closely related to a wider policy initiative to consider lifecycle emissions reporting in future vehicle CO2 regulations, which the Commission is already looking into.

- **Part 1 - Section 3: Enabling conditions and other policies**

In the "Masterplan for a Competitive Transformation of EU Energy intensive Industries: Enabling a Climate-neutral, Circular Economy by 2050", the High Level Group on Energy Intensive Industries identified three key enabling conditions: creation of markets for climate-neutral, circular economy products; developing climate-neutral solutions and financing their uptake; access to resources and deployment. For each of them, the masterplan identified few strategic priorities as well as key performance indicators. In line with the recommendations of the Masterplan, the paper on Green Deal on Steel provides more detailed proposals for supporting the successful transition of the steel industry. As indicated, this require a consistent mainstreaming across several key policies, including climate, energy, trade, state aid, R&I, industry, etc. With regards the question 3.3 on the use of revenues of carbon pricing policies, it shall be noted that the ambitious mid-term decarbonisation target as well as the 2050 climate neutrality target imply that such revenues will be decreasing by definition. Hence, their use for low carbon technologies and infrastructure is even more sensible, since the financial needs for these applications is extremely high at the beginning of the transition but decreases once technologies reach high levels of market penetration and infrastructure is built.

- **Part 2 - Section 5 Climate and energy policy design**

Question 5.1

As mentioned above, the focus of the possible additional climate ambition should be on non ETS sectors. Preliminary assessments by independent analysts[1] indicate that with the existing burden sharing between ETS/non ETS sectors, an increased ambition to 50% or 55% would have a significant impact on the EU ETS market, with a respective reduction in available allowances by 1.2 and 1.8 billion. In the absence of further adjustments, that would translate in reduction of free allowances respectively by around 500M and 750M, which would more than nullify the 3 % auctioning/free allocation shares' flexibility agreed in the recent ETS revision after almost 3 years of negotiations. According to other analysists[2], carbon prices would rise to levels around 50€-75€ by 2030 for an ambition at 50% or 55%. The possibly higher contribution of LULUCF needs to take into account also the need to secure sufficient access to sustainable biomass.

- **Question 5.2 EU Emissions Trading System (EU ETS)**

If a higher target is applied to ETS sectors, its implementation needs to avoid any impact on the ability of the system to mitigate the risk of carbon leakage for sectors exposed to carbon leakage such as steel. Under no circumstances, existing carbon leakage measures (free allocation and indirect costs compensation) should be reduced. Furthermore, the impact of the climate ambition on the carbon price needs to be assessed, since this also has an important direct impact on the direct and indirect carbon costs.

[1] https://www.linkedin.com/pulse/what-55-2030-emission-reduction-target-means-eu-ets-marcus-ferdinand/
[2] http://climatecake.pl/wp-content/uploads/2020/03/Impact-on-the-reduction-target-for-2030-and-on-the-EUA-prices.-Summary.pdf

Taking into account this criterion, the following preliminary assessment of the options listed in question 5.2 can be made:

1. *Increase the linear reduction factor and as such reduce faster the amount of allowances available each year:* this solution provides a transparent tool to achieve the higher 2030 target as it can be easily compared with the current 2.2% LRF. However, if the share of free allocation is not increased further (i.e. more than the 3% flexibility already foreseen), it will reduce the amount of free allowances available to mitigate the risk of carbon leakage. If this option is pursued, it should be clarified that the increased LRF is applied temporarily until 2030, while a new assessment would be necessary for post 2030.
2. *Increase the linear reduction factor as well as lower the starting point on which the linear reduction factor is applied (i.e. shifting the total allocation downwards):* this solution would modify not only the level of ambition by 2030 but also the overall trajectory through the "rebasing" of the starting point. Due to the "rebasing", it is not possible to compare easily this solution with the current regulatory framework, since the new LRF would be based on a different calculation. While more details are necessary for a final evaluation, this is likely to reduce the available allowances in the period 2021-2030 by more than option 1, hence impacts more also the free allocation.
3. *Introduce a pricing policy (e.g. minimum price floor):* this solution would modify further the cost-competitive "cap and trade" nature of the EU ETS, which has been already affected by the introduction of the Market Stability Reserve; the reserve indirectly influences the carbon price through quantitative interventions that interfere with the demand and supply balance of the system. While it would not impact directly the free allocation volumes, the minimum price floor would likely increase artificially the price beyond the cost-effective level and would not provide the legal certainty of attaining the requested level of ambition.
4. *Reduce or eliminate the share of free allocation:* this solution would be inappropriate both from the viewpoint of environmental integrity as well as industrial competitiveness, since it would not provide the legal certainty of reaching a higher target (which is secured by the overall ETS cap, not by the amount of free allowances) and it would increase exponentially the risk of carbon, jobs and investment leakage to third countries.
5. *Strengthen the Market Stability Reserve rules (e.g. update feed rates) but allow other policies to be the primary drivers to increase greenhouse gas reduction ambition:* this solution would be mainly a strengthening of provisions that are already in the current legislation while rather retaining cost-free allocation. The reserve would intervene to balance the impact of other policies by (possibly) removing allowances available for auctioning without interfering with the free allocation. If allowances are cancelled from the reserve, this would have an impact on the trajectory and the overall amount of allowances in the period 2021-2030 but still without affecting the free allocation. While the higher climate ambition would be secured mainly by the other policies, the main role of the reserve would be to counterbalance the impact of such policies on the demand-supply equilibrium and to sustain the ETS carbon price. While this option would not affect the free allocation, its impact on the carbon leakage mitigation would depend on the achieved level of carbon price and its economic sustainability for sectors exposed to global competition.

- **Question 5.2.1 Addressing carbon leakage risk for energy intensive industry**

In the context of persisting and widening divergence of climate ambition across the world, an increased EU target requires a strengthened framework of carbon leakage provisions that need to be effective and urgently applied. As stated in the Green Deal Communication, carbon leakage can occur *"either because production is transferred from the EU to other countries with lower ambition for emission reduction, or because EU products are replaced by more carbon-intensive imports"*. Measures to prevent carbon and investment leakage should address both forms of risk, coming from direct and

indirect carbon costs. This requires on one side free allocation and indirect costs compensation at the level of benchmarks and on the other side the rapid development and implementation of border measures that complement such provisions to tackle emissions linked to international trade and foster climate ambition in third countries. In addition, the carbon leakage framework needs to address also the big challenge of abatement costs that EU producers must face in order to implement the investments in low carbon technologies.

- **Part 2 – Section 5.3 EU emissions trading extension to road transport and buildings**

We welcome the statement that all sectors of the economy and society will need to contribute to the transition. It is crucial to untap the large potential e.g. in the buildings, agriculture and transport. Therefore, if a higher target is agreed, its implementation and achievement should be based on additional contribution and efforts by sectors not currently covered by the EU ETS. The details of such measures – carbon pricing through taxation or cap and trade, at EU or at national level- need to be optimized for the desired level of ambition.

We do not support the proposal to include in the existing EU ETS sectors resilient to carbon abatement such as transport since they would drive up the carbon price, with a major impact also on sectors exposed to international competition and carbon leakage risk. If it is decided to include them in a cap and trading system in order to increase their effort and regulate them more easily at European level, this should be done with a separate ETS. Finally, a more detailed assessment on the impact of the possible inclusion of maritime sector in the EU ETS is necessary in order to appreciate its possible implications for the overall carbon market and in particular for sectors exposed to carbon leakage.

- **Part 2 – Section 5.4 Role of the Effort Sharing Regulation**

As mentioned above, the overall ambition of sectors currently under the Effort Sharing Regulation as well as those under the LULUCF Regulation should be increased more than that of current ETS sectors, if a higher target is agreed. This is consistent also with the principle of intertemporal efficiency of emissions reductions, since these sectors will need to contribute significantly also to the climate neutrality target in a 2050 perspective. The level of ambition of non ETS sectors should take into account not only the overall cost effectiveness of EU society but also the risk of carbon leakage for ETS sectors. As the EU moves further in the transition towards climate neutrality, it will need to rethink the boundaries between ETS and non ETS sectors in a long term perspective beyond 2030. The role of the Effort Sharing Regulation should be adjusted depending on the details of the measures adopted for such sectors.

- **Part 2 – Section 5.6 Role of energy policies**

If the climate ambition is increased, the interaction among the GHG, renewable and energy efficiency targets need to be assessed. In any case, this should not lead to additional direct or indirect impact on sectors recognised at risk of carbon leakage, as it would undermine the effectiveness of the carbon leakage provisions. Furthermore, energy policies need to prioritise the development of the additional capacity and infrastructure that is needed for the transition to climate neutrality in order to secure access to competitive low carbon energy.

- **Part 2 – Section 5.7 Energy infrastructure and sector integration**

Please see Annex 3, EUROFER paper on smart sector integration

- **Part 2- Section 5.7 Enabling conditions and polices for industrial transformation**

Please see Annex 1, EUROFER paper on Green deal on steel. Summary of key enabling conditions and policy measures below:

  - Preserving the level playing field

    - Free allocation and indirect costs compensation at benchmark true demand level
    - Carbon border adjustment
    - Measures to foster steel recycling
- Access to competitive low carbon energy
    - Mapping and building the necessary infrastructure
    - State aid to reduce costs of low carbon energy
    - Hydrogen strategy
- Funding R&I&D and market uptake
    - Clean Steel Partnership & SPIRE
    - Innovation Fund
    - Important Projects of common EU Interest
    - National support (based on state aid rules)
- Creating climate friendly lead markets
    - Risk sharing instruments e.g. contracts for difference
    - Requirements and incentives for climate friendly steel use (e.g. climate friendly steel credits for OEMs)
    - Public procurement

- **Part 2- Question 5.9 Waste policy**

The European Waste Legislation (Waste Framework Directive 2008/98/EC) already covers Construction and Demolition Waste. More precisely, the legislation has a target that groups and countsr ecovery and recycling together. This situation does not support a proper dynamic that incentivize material recycling in the construction sector, because construction materials such as concrete or stone are backfilled (recovery); nevertheless they are counted as recycled, which for other materials is when a waste is reprocessed into a new product or material.

Therefore, a differentiation between the two activities – recovery and recycling – should be pursued in order to give the right environmental and circularity value to the different end of life options of materials. Therefore, we strongly support the introduction of further (new) recycling targets for the construction sector for which the recycling target counts only the materials that are really reprocessed into new materials and products, remaining within the economic cycle. Thus, the EU Waste legislation should differentiate between recovery and recycling targets, which can contribute in different ways and to a different extent to environmental and climate goals of the EU Commission.

On the contrary, industrial waste is not comparable to waste generated by society.It often is functional to the industrial production processes - a key production enabler - and their recycling (strategies, processes and procedures) often depends on internal and external choices made by other industrial sectors. The steel sector utilises circular economy principles since the beginning of its history, adopting internal or external recycling strategies. For instance, co-generated materials, independently if as by-products, waste or End-Of-Waste, are often wanted by other industrial sectors that find the quality and the quantity of the material fit for their scope. If this symbiosis of sectors does not even help to avoid waste generation, in any case it avoids disposal and sourcing of virgin raw materials. Thus, if the right conditions exist, the steel sector always opts for recycling its output materials. However, the recycling of this material, when not done internally, uniquely depends on factors, such as economics, geographical location of the site, presence of other industrial sites nearby, availability and quality, legal conditions and others. For all these reasons, the management of industrial waste, their treatment and recycling are dealt within the BREF documents released for each industrial sector covered by IED (i.e. vertical BREFs). And this because, recycling of industrial waste is very sector specific and has to face specificities and dynamics of different value chains with which waste is exchanged (i.e. other industrial sectors that might source their industrial waste). Thus, in

order to positively contribute to EU objectives set in EU Green Deal, Climate and Circular Economy, the conditions for ensuring industrial waste recycling should be created via an adapt legal framework and defining correct criteria rather than simply imposing recycling targets on industrial waste of a sector. The (external) recycling capacity for a sector often depends also on external factors. This is what makes industrial waste different from municipal and house-hold (anthropogenic) waste.
A simple recycling target on industrial waste is not able to take into account the limits and issues linked to cooperation among industrial sectors. Maybe a more targeted approach focusing on sector specific and waste stream specific recycling targets might be considered but only when the correct criteria and framework conditions are in place.

- **Part 2- Section 6 EU policies and outreach towards third countries on climate change policy**

Question 6.1

From the viewpoints of environmental integrity as well as industrial competitiveness, it is essential that climate diplomacy is mainstreamed in large platform where largest emitters and trading partners are represented, such as the G 20. This should aim at achieving comparable level of climate ambition as well as related efforts and costs for industrial competitors in those countries.

Question 6.3

Please see Annex 2, EUROFER paper on border adjustment and carbon leakage measures.

Section 7 (any other business)

EUROFER summary points on sustainable finance / taxonomy

- Using an integrated lifecycle approach to take into account steel as an enabler for CO_2 mitigation in multiple value chains.
- Using the principles of standard EN 19694-2, developed with a mandate from the EU Commission, to assess relative performance in place of unsuitable ETS benchmarks.
- Greater coherence with other approaches, such as those used in the EU Innovation Fund.
- Securing the eligibility of EAF steel production without excluding different steel qualities, like stainless steel, due to the threshold proposed on scrap sourced iron content in final products.
- Adding CCU to the list of low carbon breakthrough technologies and acknowledging alternative sources of hydrogen production.
- Provide enabling conditions for the fact that the decarbonisation pathway for steel will not be linear, requiring step changes and investments spanning several decades.
- Ensuring that the Sustainable Platform involves also experts from the manufacturing industry, including the steel sector.

ANNEX 1 - A GREEN DEAL ON STEEL

PRIORITIES FOR TRANSITIONING THE EU TO CARBON NEUTRALITY AND CIRCULARITY

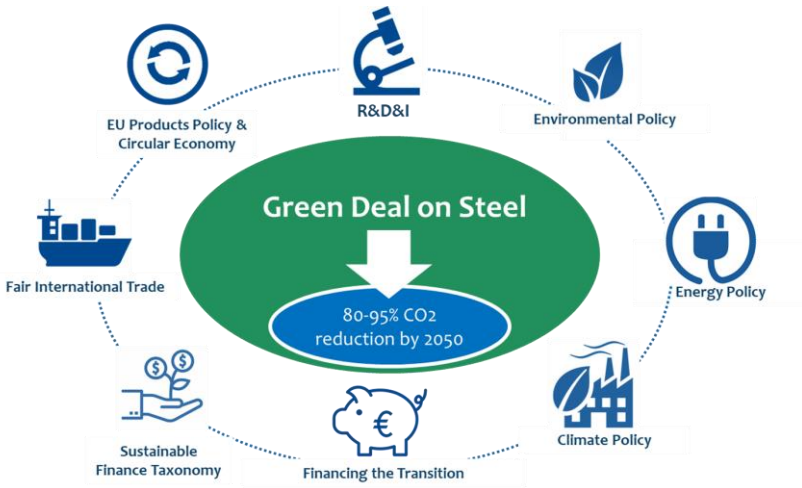
Europe has the opportunity before it to lead the transformation of its economy to a future in which it is carbon-lean, environmentally responsible, circular and able to compete internationally. Steel is central to the EU economy, and it underpins the development of major manufacturing sectors right along the value chain.

With supportive conditions in place, notably the right infrastructure and a supportive regulatory framework, the European steel industry will be empowered and fully committed to the EU's climate objectives and sustainable growth targets. The sector would be able to develop, upscale and roll-out new technologies that could reduce EU steel production's CO_2 emissions by 30% by 2030 and by 80 to 95% by 2050, while contributing to greenhouse gas mitigation across all sectors.

COMBINED POLICY SOLUTIONS

A Green Deal on Steel is not a single policy. Rather it combines existing EU policy fields and updates them to provide specific objectives, alongside how to field-test best practice *in low-carbon steelmaking*. These Green Deal on Steel actions need to be compatible with, and inclusive of, the various facets of the EU's broader Green Deal climate policy; the Green Deal will have a wide and varied impact across all EU industries, thus it must be coherently constructed and deployed. The success of the Green Deal depends on the horizontal, cross sectoral integration of an industrial strategy and needs to be implemented throughout the full value chain.

The policy recommendations below are, in EUROFER's view, essential to succeeding in the aims of ensuring the EU steel industry remains on track to meet its emissions reductions targets (i.e. 30% by 2030 and 80-95% by 2050) whilst also remaining competitive globally and finding a sustainable market for its green steel products.



POLICIES FOR A SUCCESSFUL GREEN DEAL ON STEEL

RESEARCH & DEVELOPMENT & INNOVATION

Deploying breakthrough technologies

The most promising breakthrough technologies need to be tested and implemented on an industrial scale between 2020 to 2030, and beyond. These include Carbon Direct Avoidance (CDA: hydrogen-

and electricity-based metallurgy), and Smart Carbon Usage (SCU: Process integration and Carbon Valorisation, CV, or Carbon Capture and Usage, CCU).

A European Partnership for Clean Steel

- Adopt the European Commission proposal for a 'Clean Steel' European partnership under Horizon Europe and support the demonstration of breakthrough technologies in steelmaking (Carbon Direct Avoidance and Smart Carbon Usage).

Synergies and sequencing among different financing schemes

- Ensure synergies between various financing programs, e.g. between the EU ETS Innovation Fund and Important Projects of Common European Interest (IPCEIs) and a 'sequencing mechanism' for continuation of successful projects under Horizon Europe.

ENERGY POLICY

Low- or CO_2-neutral steel transition energy requirements

The EU steel industry will require approximately 400TWh of CO_2-free electricity every year by 2050 (including for the production and use of hydrogen). The reliable availability and abundant supply of low- or CO_2-neutral energy (mainly electricity and hydrogen) at economically viable, affordable cost levels is a necessary pre-condition for the successful transformation of the steel sector in the coming decade and beyond.

Infrastructure investment planning

- For investment planning, map current and future requirements of EU energy infrastructure.

Regulatory framework for EU energy network

- Adopt and implement a common European hydrogen strategy.
- Foster the development of green electricity while maintaining the international competitiveness of energy-intensive sectors that participate in global markets.
- Support the development of electrolysis plants and distribution networks to scale-up green hydrogen production.

State Aid rules

- Enable state aid to adjust the price of green electricity and hydrogen to an internationally competitive level. This would provide a reliable and viable cost basis for investment decisions in CO_2-lean steel plants.

CLIMATE CHANGE POLICY

Ensuring international competitiveness throughout the transition and beyond

The steel sector is the most exposed to carbon leakage of all energy intensive industries. During and beyond the transition towards production of CO_2-lean steel, a supportive regulatory framework that ensures a level playing field with third country competitors is required. To this end, steel products sold on the EU market, whether produced in the EU or imported from third countries, and steel exported from the EU to third countries need to have similar CO_2 cost constraints.

Short-term regulatory framework: improve carbon leakage protection with a Carbon Border Measure

- Introduce, for a transitional period, a WTO-compatible Carbon Border Measure that factors in both direct and indirect emissions. This measure needs to be set at an **effective** level to avoid carbon leakage via imported products; the measure also needs to be introduced in addition to existing

carbon leakage provisions on free allocation and indirect cost compensation within the existing EU ETS. Introducing Carbon Border Measure and removing free allocation would not prevent carbon leakage; it would almost certainly be detrimental to steel production in Europe.

Short and mid-term: Create lead markets for low carbon products with demand-side measures

- Introduce incentives for steel users (such as automotive, among others) to use 'green steel'. The EU regulation on passenger cars should apply a more holistic approach towards Life-Cycle Thinking through CO_2 credits for the use of 'green materials', such as 'green steel'. The implementing act which to date limits 'Eco-innovation' credits (for CO_2 savings of up to 7 g CO_2/km) to the 'efficient operation' of the vehicle should be extended to include 'green materials'.
- Promote low carbon products in public procurement.
- Facilitate CCS and CCU options to support the steel industry in decarbonising.

Mid- and long-term: enhanced measures

- A methodology for calculating the CO_2 footprint (through the value chain, including *scope 3*) as a basis of future regulatory solutions.
- Introduce, as a complement to the Carbon Border Measure, a minimum CO_2 standard, based on the footprint calculation that must be met by all steel products sold on the EU market in order to ban the dirtiest steel from the market.
- Carbon-added tax that functions similarly to VAT
- Measures and incentives to keep ferrous scrap in the EU for its subsequent treatment and quality improvement, helping to deliver on the EU's circular economy and CO_2 reduction objectives.

SUSTAINABLE PRODUCTS AND 'ALTERNATIVE' MATERIALS FOR THE CIRCULAR ECONOMY

Steel is a highly versatile, sustainable product, and it contributes to making society as a whole more sustainable

The circular economy policy field is broad and encompasses a range of EU regulatory measures and initiatives. As a result, in enacting the Green Deal, care must be taken to align it with existing principles in the EU's circular economy policy, most notably the Circular Economy action plan (e.g. the next climate policy, toxic-free/zero-pollution and chemicals strategies and the Industrial Emissions Directive).

Steel is a permanent material – it is reusable and endlessly recyclable. Steel scrap generated in the EU should be considered as a strategic resource insofar as its use is essential to the completion of the EU's circular economy – in addition to recycling supporting the EU's CO_2 reduction objectives.

Scrap has, embedded within it, a considerable energy use and CO_2 reduction potential that is lost by EU economy when it is exported to third countries – of which 18 million tonnes are exported net every year. Annually, the steel sector generates – alongside its 165 million tonnes of finished steel products - around 40 million tonnes of other materials which are used as alternatives (i.e. as secondary raw materials), thereby replacing virgin resources in numerous downstream sectors.

Enhancing circularity requires a holistic EU Products and Secondary Raw Materials Policy by developing and applying:

- Life-cycle assessment (LCA) and
- Product indicators such as:
    - A Circular Footprint Formula (CFF)

  - Circular product requirements (e.g. re-usability, high quality recyclability, durability and disassembly), and
  - Co-products/residues use
- Recognition and integration of the EU Product Policy as an 'enabler' of climate and resource efficiency goals.
- Extension of the scope of the Eco-Design Directive, focusing on sustainable products and on product design requirements.
- Prioritising the use of 'alternative' materials, (such as by-products, end-of-waste and waste) over virgin materials, irrespective of their legal status in public procurement and tender.
- EU-wide criteria for by-products and end-of-waste materials.
- The use of 'alternative' materials, which must meet the same standard specifications used for virgin materials.
- A toxic-free strategy that focuses on reducing the actual risk of exposure, and not on the theoretical content of hazardous substances; This would further facilitate and enable circularity.

FINANCING THE TRANSITION

Transition to the low-carbon future will require a range of financing mechanism

EU steel producers face not only the compliance costs of the EU ETS (€25 per tonne of CO_2 in October 2019), but the full abatement costs. These costs can be more than ten times the current compliance cost per tonne of CO_2 abated. Steel markets will not tolerate respective cost pass-through and therefore an overall legal framework needs to address both issues.

The new technologies would result in additional production costs for the EU steel industry of at least €20 billion per year compared to the retrofitting of existing plants (i.e. upgrading of existing plants with best available techniques), of which at least 80% Operating Expenses (OPEX) mainly due to prices for CO2 lean energy. Public financial support for R&D&I and up-scaling to initial industrial demonstrators remains crucial. The cost per tonne of primary steel would likely increase by 35% to 100% compared to the current baseline.

EU and national financial support schemes

- Support private capital with a consistent and coordinated framework of public funding opportunities at EU, national and regional level:
  - de-risking facility with zero or low-interest loans over very long maturities,
  - EU-wide programs, e.g. Private-Public-Partnerships (PPP) and Important Projects of Common European Interest (IPCEI)
  - CO_2 grants, and
  - other forms of 'contracts of difference'.

SUSTAINABLE FINANCE

Ensuring access to sustainable finance

Massive transformative investments are needed for the development, demonstration and scaling up of new CO_2-low technologies over a relatively short time period. The sustainable finance taxonomy should maintain a flexible approach that prevents prescriptive and rigid categories which do not take the dynamic evolution of technology into account.

Taxonomy Regulation/Technical Screening Criteria

- Enable industrial activities in transition towards a low-carbon and energy efficient society to access financing at competitive conditions.

- ETS benchmarks are not suitable as thresholds for sustainable finance. GHG performance assessment should be performed on entire value chains and full life cycle analysis (LCA). Instead of the ETS benchmarks, a European Standard EN 19694 should be used.

FAIR INTERNATIONAL TRADE FOR INDUSTRY

The EU steel industry stands for fair international trade, which must be based on global rules that are effective and enforceable, ensuring a level playing field for all.

Global steel overcapacity and related government support measures continue to hinder the financial and economic sustainability of the global steel industry. Steel is an intensively traded product. Global overcapacity was around 440 million tonnes in 2019, equivalent to almost 25% of global steel production capacity.

EU steel imports have increased significantly, up from 18 million tonnes in 2013 to a record 30 million tonnes in 2018. 2019 import levels have remained high, and a return to growth in the EU steel market in 2020 is expected to be accompanied by a return to rising import levels.

EU steel safeguard

- Urgently align the EU's tariff-free steel import quota with market realities and decreased EU demand and stabilise import flows

Fair international trade

- Counter dumping, governmental subsidisation and other support schemes in third countries by improving the application of Trade Defence Instruments (TDI).
- Modernise the WTO rulebook to more effectively tackle trade distorting practises, in particular excessive subsidies to industry.
- Continue addressing global steel excess capacity at international level.
- Gain a new leverage at international level by:
    - Developing effective solutions to promptly react to unilateral protectionist measures.
    - Upgrading the EU's Enforcement Regulation to allow the use of sanctions when third countries adopt illegal measures.
    - Reciprocity where third countries deny access to public procurement.
    - Enforcing screening of Foreign Direct Investment.
    - Analyse new Free Trade Agreements, and if appropriate revise existing ones, to ensure market access and the sustainable development of EU industry.

ENVIRONMENTAL POLICIES

Environmental policies need to be modern, based on science and efficiently implemented to support the industrial transition.

- Permits in Industrial Emissions Directive (IED) should be updated and granted based on a technology driven analyses and a transparent and robust methodology to derive emission limits.
- Modernise the Water Framework to enable a resilient water system combined with industrial and societal development.
- Introduce a risk-based approach to evaluate environmental and health effects of materials.

EUROFER POSITION PAPERS

EUROFER has published a range of papers, studies, and reports that highlight the thinking behind its positions. These documents underpin EUROFER's call for a Green Deal on Steel.

All of these documents can be downloaded by visiting:
www.eurofer.be/documents/greendealonsteel

ENSURE COMPETITIVENESS THROUGHOUT THE CLIMATE TRANSITION AND BEYOND

- EUROFER Discussion Paper: '*A Regulatory Framework for CO_2-Lean Steel Produced in Europe*'
- EUROFER/ESTEP Position Paper: '*The European steel industry welcomes the Commission proposal for the 'Clean Steel - Low Carbon Steelmaking' European Partnership*'
- EUROFER Vision Paper: '*Towards carbon neutrality: A European Partnership for Clean Steel*'
- EUROFER Low Carbon Roadmap: '*Pathways to a CO_2-neutral European Steel Industry*'
- EUROFER Position Paper: '*Revision of the Environmental and Energy Aid Guidelines (EEAG)*'
- EUROFER Fact Sheets: '*Revision of the Environmental and Energy Aid Guidelines (EEAG)*'
- EUROFER Position Paper: '*Compensation of indirect carbon costs in the post 2020 EU ETS*'
- NERA Economic Consulting Executive Summary: '*Characteristics of European Steelmaking in the Context of Indirect Emissions Costs*' study
- EUROFER Position Paper: '*Sustainable Finance Taxonomy Update*'
- EUROFER Position Paper: '*On Technical Report on EU Taxonomy of June 2019*'

FAIR INTERNATIONAL TRADE FOR INDUSTRY

- EUROFER Position Paper: '*Global Forum on Steel Excess Capacity*'
- EUROFER Infographic: '*Safeguarding EU Steel*'
- AEGIS Europe Position Paper: '*The reform of the WTO*'
- AEGIS Europe Position Paper: '*A call for a more effective application of existing EU policy instruments and improvements where needed*'
- AEGIS Europe Position Paper: '*Public Procurement*'

SUSTAINABLE PRODUCTS AND THE CIRCULAR ECONOMY

- EUROFER Position Paper: '*Policy Options for Product Environmental Footprint (PEF)*'
- EUROFER Position Paper: '*Towards an EU Product Policy Framework*'
- EUROFER Position Paper: '*The New Circular Economy Roadmap – Summary & Priorities*'
- EUROFER Input: '*Consultation on the New Circular Economy*'

EUROFER Brochure: '*Steel and the Circular Economy*'

ANNEX 2 - A CARBON BORDER MEASURE COMPLEMENTING TEMPORARILY EXISTING CARBON LEAKAGE MEASURES

This paper clarifies the reasons why it is appropriate from environmental, economic and legal perspectives to implement initially a carbon border measure as a complementary provision in addition to the existing carbon leakage measures.

The EU Green Deal is a landmark for the EU leadership in the international fight to climate change. The Green Deal proposes to step up substantially not only the long-term climate objectives for 2050 but also the short-term ones for 2030. Considering the current Intended Nationally Determined Contributions (INDCs) of international partners, this is likely to increase even further the differences in levels of ambition worldwide. This trend can be assessed by the end of 2020, when signatories of the Paris Agreement need to submit their final NDCs as well as their mid-century strategies.

In this context, avoiding the risk of carbon leakage is a pre-condition for preserving both the environmental integrity of EU climate policy and industrial competitiveness, since it contributes to reduce emissions at global level while maintaining jobs and investments in Europe. This will also be instrumental in facilitating the social acceptance of EU leadership in climate ambition.

Due to the market characteristics of the sector, tackling successfully the risk of carbon leakage in the steel industry is particularly relevant. As recognised in the 2018 Commission Communication "A clean Planet for All" as well as in the 2015 Impact Assessment accompanying the Commission proposal on the post 2020 EU ETS Directive, the steel sector is the most exposed among all energy intensive industries, both in terms of possible impact on output and on investment.

The Green Deal underlines that the risk of carbon leakage can materialise in different forms, "*either because production is transferred from the EU to other countries with lower ambition for emission reduction, or because EU products are replaced by more carbon-intensive imports*". As long as there is no international binding agreement with a global carbon price and equivalent efforts, it is essential that the EU legislation adopts effective measures that avoid all forms of leakage in the short term but also in medium term.

While free allocation is designed mainly to address the risk of production relocation, a carbon border measure can be an effective instrument to address structurally the emissions embedded in trade. This measure should take into account the carbon intensity and related costs in the EU and compare them with third countries.

The border measure should be applied for a transition period until breakthrough technologies reach sufficient market penetration and CO2-lean products represent a critical mass in the market. It represents a broader contribution to a clean planet, as it is also an effective tool of political diplomacy to foster climate ambition in third countries so that deeper emission reductions are delivered globally. Furthermore, it would provide additional revenues to the EU that should be fully used for climate measures, in particular for the development and upscaling of industrial breakthrough technologies.

An effective carbon border measure needs to take into account both direct and indirect costs of the EU ETS and to create incentives for third countries' competitors to implement similar emission reductions. As proposed by the Commission, it should apply initially only to few sectors and others could opt in gradually. In the case of steel, it could initially apply only to steel finished and semi-finished products such as coils, slabs, plates, bars, billets, etc, and be extended to steel input materials (scope 3 emissions). A workable solution should preserve also those downstream products that are primarily

based on steel, such as tubes, fasteners and wire drawings. The EU could adopt "Agreements of Equivalence" with third countries that either join the EU ETS or have identical CO_2 cost constraints for their industry, in which case there will be no border measure.

The effectiveness of the border measure will depend on the details of its design and its ability to tackle delicate issues such as the risk of absorption and source shifting.

With regard to the former, it is important to consider that EU carbon costs are applied to the entire EU production, while any border measure would likely apply only to the marginal tonnes that third countries' producers export to the EU, hence having the possibility to absorb such costs throughout their entire production. As an example, an EU producer with a total production of 5 million tonnes of steel and an average carbon cost of 10€/tonne will pay €50 million, while a third country producer with the same total production but exporting to the EU 5% of its production (250,000 tonnes) would face only costs of €2.5 million, which are much easier to absorb. By doing so, the EU imports would still set the price at a low level that does not reflect the actual carbon cost. From the example, it is clear that a measure based on average carbon costs spread over the entire EU steel production would not align the true costs of EU domestic producers with those of imports, continuing to erode EU domestic steel producers' competitiveness and render EU climate legislation increasingly ineffective.

Source shifting refers to the possibility that a third country producer exports to the EU the low carbon footprint products while selling products with high embedded emissions in other markets. This practice, which is prohibited in the Californian ETS, may prove difficult to identify and discipline.

These complex issues need to be fully solved in order to have an effective carbon measure. Applying full auctioning as soon as the border measures is implemented would expose the whole EU production to the full carbon costs in the decisive period where breakthrough technologies are being developed and upscaled. As long as EU imports would be setting the steel price at lower value, this situation would cause the concrete risk of leaking emissions, jobs and investments to third countries, hence undermining on one side the environmental integrity of the mechanism and on the other side the social acceptance of EU leadership in climate policy. This would be counterproductive for the successful implementation of the Green Deal.

Against this background, and considering all the elements below, it is essential that a carbon border adjustment is implemented as a complementary measure in addition to existing carbon leakage provisions in the transition towards climate neutrality:

- A carbon border measure aims to reach the combined environment objectives of the EU policy: reducing emissions, avoiding carbon leakage and complying with the costs of the cap & trade system. A complementary border adjustment would not lead to double protection, since existing carbon leakage measures are already partial and digressive. In fact, even with free allocation and compensation, EU producers bear carbon costs that are not applied to extra EU competitors. This divergence will further increase in the future.
- Moreover, EU producers are subject not only to compliance costs for the difference between their emissions and free allocation and between indirect costs and compensation (i.e. the "trade" element of the EU ETS), but also to the full abatement costs that are necessary to develop the breakthrough technologies required to fulfil the emission reduction targets (i.e. the "cap" element of the EU ETS). A border adjustment replacing the existing carbon leakage measures would undermine their financial ability to invest in those technologies.
- While it is important to develop the border adjustment as soon as possible, its implementation should not lead to abrupt modifications of existing provisions in order to secure legal certainty for

long term investment decisions. In particular, rules on carbon leakage measures for the period until 2030 have been adopted very recently and should not be modified.

- A carbon border measure implemented as a complementary instrument would also reduce the direct impact on trade flows and would mitigate trade tensions as it would provide a longer transition for negotiations with international partners to align climate ambition.
- Similarly, a border measure complementary to free allocation and indirect costs compensation would decrease the product price impact on downstream sectors within the EU, hence better preserving the entire value chain.
- As long as it is uncertain whether a border measure may address the environmental and competitiveness concerns linked to EU exports in third countries, a border measure with full auctioning for EU producers would burden them with the full carbon costs, thereby undermining their ability to access export markets.
- If a carbon measure is implemented with full auctioning for some sectors, the legal framework will lead to significant distortions of competition against other sectors that are still largely shielded from the carbon costs through free allocation and indirect costs compensation.
- It is clearly possible to design a WTO compliant carbon border measure that complements free allocation and indirect costs compensation in a transition period, since there is no WTO legal obligation to reduce or phase out these measures.

While a border adjustment based on the equivalent direct and indirect ETS costs can be an effective measure in the initial transition phase, a long-term regulatory framework is required for the advanced transition phase and the post-transition, i.e. when the breakthrough technologies reach sufficient market penetration and CO_2-lean steel represents a critical mass of the market, but operation costs are still significantly higher than for competitors with CO_2-intensive production. Such framework should be based on the actual CO_2 footprint of the product over the entire life-cycle, requiring the development of a proper accounting system, both at EU level and at the border

ANNEX 3 - EUROFER CONTRIBUTION TO THE PUBLIC CONSULTATION ON SMART SECTOR INTEGRATION STRATEGY

The EU Strategy on smart sector integration (hereafter "the strategy") is a key milestone of the overall regulatory framework that is required for the transition towards climate neutrality. Such strategy needs to embed a strong industrial pillar, as industry will play a major role in the transition and its interaction with the energy sector will change significantly. Cross-sectoral cooperation, not only between the gas and electricity supply, but also between the industry and energy sector will be essential. Cooperation between sectors across borders in an industrial symbiosis model is already strong today. It will increase further in the future, thanks also to the further development of digitisation tools. This process will lead to new business models, technologies and industrial eco-systems that may further optimise resource and energy efficiency. In parallel, energy supply and demand will change as a result of declining fossil fuels as well as a growing share of intermittent renewable electricity and new energy carriers (e.g. synthetic fuels, hydrogen, etc.).

The in-depth analysis accompanying the Commission's Strategic Vision "A Clean Planet for all" indicates that deep emissions reductions in the steel sector are possible through a combination of technological pathways, including steel recycling, carbon capture utilisation and storage, process integration, and electricity/hydrogen-based metallurgy. Furthermore, life-cycle thinking, biomass, digitisation and automatization also contribute to the transition.

Access to secure, sustainable and globally competitive energy will be essential for a successful transition. According to the recent EUROFER Roadmap, the EU steel industry alone will require directly and indirectly about 400 TWh of climate neutral electricity per year; this corresponds to more than seven times its actual electricity purchase from the grid. Considering the exponentially increasing needs, it is essential to avoid restrictions to some energy generation solutions that can contribute to emissions reduction at cost competitive conditions.

As highlighted in the "Masterplan for a competitive transformation of energy intensive industries", it is essential to develop a timely mapping of the current and the desired future energy infrastructure and supply taking into account the possible evolution of the demand. With regard to competitive energy, the EU state aid framework plays a crucial role. In particular, the Environmental and Energy Aid Guidelines (EEAG) under revision by 2021 on one side need to continue protecting energy intensive sectors exposed to global competition such as steel from regulatory costs and on the other side need to allow new forms of aid to cover the additional OPEX linked to low carbon steelmaking by breakthrough technologies.

Against this background, the following elements that are relevant for the transition of the steel sector should be addressed in the smart sector integration:

- **Hydrogen use in steel industry**: according to the technological pathways identified by the companies in the last years, and provided that it is available at internationally competitive conditions, the EU steel industry could become a large consumer of hydrogen, mainly as a reducing agent in the carbon avoidance pathway and as a feedstock in the smart carbon usage pathway, and as a fuel to a more limited extent. Therefore, the steel industry supports the development of a regulatory framework that fosters the timely and competitive deployment of hydrogen to those sectors and applications that deliver the highest emissions abatement while ensuring cost competitiveness and preserving the level playing field within the EU. The following elements should be considered when developing the regulatory framework:

- All forms of low carbon hydrogen production should be supported in a technological neutral way. Considering the exponentially increasing needs, it is essential to avoid restrictions to some technologies that can contribute to emissions reduction at cost competitive conditions.
- Considering its very high value as an industrial feedstock, the direct use of hydrogen as a molecule should be prioritised. This high value cannot be exploited anymore if it is blended in the natural gas grid. Therefore, hydrogen use as energy carrier should be only the last option, for instance if the constraints for direct electricity transport are too big and costly to overcome. Furthermore, blending of hydrogen needs to take into account also technical limitations with regards current equipment's ability to manage higher fuel quality variability.
- The use of hydrogen should be promoted on the basis of a standardized LCA methodology assessing its GHG and cost efficiency as well as its GHG avoidance. Taking into account the large abatement potential in the steel sector but also its high exposure to international competition, the use in the sector should be prioritised at internationally competitive conditions.
- It is essential that the statistical classification as well as its implications on taxation and price regulation are assessed carefully. For the purpose of taxation, a differentiation must be made between usage as energy or usage as feed-stock, consistently with the current Energy Taxation Directive that recognises the use of energy products for metallurgical purposes. It is also important that the statistical framework (Eurostat energy balances) maintains a level playing field between hydrogen imported in a steel plant and hydrogen produced on-site, so that the latter is not disincentivised. In particular, if electricity is purchased by a steel site to produce hydrogen on-site for use as feedstock, it should not be considered as primary energy consumption (falling under the Energy Efficiency Directive cap) but as non-energy input.
- Considering the high costs and energy requirements for the transport of hydrogen over long distances, at least in the initial phase on site production should be prioritised. Once it reaches large scale deployment, a regulated hydrogen transport and distribution system with open access will be necessary.

- **Sector coupling through carbon valorisation:** new technologies that allow to valorise instead of releasing carbon will contribute to creating new business models and cooperation between sectors; for instance, the steel and chemical industries will exchange hydrogen-rich and carbon-rich gases to minimise the use of fossil resources. A supportive regulatory framework is necessary for the full deployment of such technological potential. In particular, it is important to implement fully the Renewable Energy Directive with a proper LCA methodology and GHG saving threshold that rewards the green contribution of recycled carbon fuels. In parallel, distortion of competition between subsidised waste streams' incineration and recycled carbon fuels' markets must be tackled. Finally, further measures are necessary to support other CCU solutions where recycled carbon is transformed in feedstock for other uses such as chemicals.

- **CO_2 infrastructure**: in order to deploy the full abatement potential of carbon valorisation and storage solutions, it is important to develop as soon as possible a regulatory framework that provides legal certainty on investments and related responsibility for CO_2 transport, compression and storage. This should overcome limitations in cross border transport of CO_2 and develop regulation to avoid monopolies in transport and storage infrastructure similarly to other utilities.

- **Direct and indirect electrification:** as a result of increased steel recycling as well as new production processes, the direct and indirect use of electricity in the steel sector is expected to increase exponentially. This trend in demand will interact with the functioning and stability of the power

grid, while intermittent renewables will achieve higher level of penetration. These trends will require larger and more flexible capacity, including storage ad backup.

On the other side, industrial consumers can contribute to a more stable energy supply system via demand response. Interlinking energy markets between the energy and industrial sectors (producers, consumers and prosumers, aggregators) can offer solutions to balance the system. For that to happen, it is important that the regulatory framework recognises and rewards the strategic relevance of activating and expanding further aggregated industrial demand response. Furthermore, a timely and supportive implementation of the Electricity Market Design needs to eliminate regulatory barriers for industrial demand-side resources to participate in all electricity markets. At the same time, participation to demand side measure should remain on voluntary basis and take into account technical feasibility of production processes as well as possible interaction with energy efficiency management.

- **Climate neutral gases**: climate neutral gases (e.g. bio-methane, biogas, hydrogen) can be a solution for decarbonizing production processes for which other solutions such as electrification are not technically and/or economically viable. The regulatory framework should support this transition and recognise the contribution of such gases also when used in ETS installations. According to preliminary draft proposals, this recognition would be restricted only to bio-methane that does not receive any other form of financial support. Such rules would undermine the feasibility of using these gases in the steel sector and limit unduly the abatement potential of this solution.