

# How the EU Industrial Strategy and Circular Economy Action Plan can support the decarbonisation of European industry

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# Introduction

**On the 10 and 11 of March 2020, the European Commission published a new Industrial Strategy<sup>1</sup> and a new Action Plan on the Circular Economy (CEAP)<sup>2</sup>. As part of the EU's new Green Deal, the two initiatives set out a direction to help strengthen the competitiveness of EU industry and achieve environmental and climate goals.**

The packages are well aligned in that several of the interventions designed to improve circularity in the CEAP are also interventions that would assist in achieving the objectives of the Industrial Strategy. For industry, there are several positive proposals that if followed up with ambitious measures should help towards decarbonising key value chains and making them both more competitive and resilient. Equally there is room to improve the scope of the initiatives and ensure that an even more comprehensive approach is taken. This briefing sets out the key elements of the Industrial Strategy and the Circular Economy Action Plans that can help drive forward the decarbonisation of industry in alignment with net zero emissions by 2050 whilst simultaneously strengthening the competitiveness of industry. The report builds on CLG Europe's policy briefing; *Forging a carbon neutral heavy industry by 2050: how Europe can seize the opportunity*, which set out four key approaches to reduce industrial emissions to net-zero by 2050 at the latest.

The importance to business of having a clear approach to industrial decarbonisation and improving resource efficiency is amplified by the Covid-19 pandemic and the unprecedented economic fallout that has resulted. Developing research in this area indicates that the increasing frequency of disease outbreaks is linked to climate change and biodiversity loss<sup>3</sup>. Taking measures therefore to reduce demand for virgin raw material extraction or by increasing energy efficiency and moving to renewable energies, can therefore help protect biodiversity loss and cut GHG emissions, and in turn reduce the risk of future pandemics and other environmental risks to the economy.

**The implementation of an ambitious Industrial Strategy and CEAP, along with more immediate Covid-19 recovery plans, therefore, presents a huge opportunity to focus investment into more sustainable business practices and deliver a more resilient European economy.**

## Context

EU industrial emissions are responsible for around 20 per cent of Europe's total greenhouse gas (GHG) emissions and over the past decade efforts to reduce these emissions have stagnated. New evidence however shows there to be a number of measures that can be taken to help drive down emissions in the sector as a whole and that a net zero emissions scenario by 2050 at the latest is also in reach.

There is no single silver bullet for industrial decarbonisation however, as it requires energy, process, product and business model transformations. Key levers include: increasing efficiency of materials and energy use, and materials substitution for low embodied carbon options; adopting circular economy approaches to recirculate inputs and using clean electricity and renewable hydrogen to power industrial production; and capturing and permanently storing residual CO<sub>2</sub> emissions.<sup>4</sup>

Significant hurdles will also need to be addressed, including managing competitiveness impacts, consistent access to low-cost renewable electricity production, and meeting high capex requirements of new innovations. And in this context, it is essential therefore that policy makers put in place the right combination of measures to support and increase industry efforts to cut their emissions over the coming years.

Priority must also be given to sectors of the economy that are difficult to decarbonise, including steel, cement and chemicals.<sup>5</sup> These sectors in particular are responsible for almost 15 per cent of EU GHG emissions and their decarbonisation will be crucial if Europe's midterm (2030) and longer term (2050) climate goals are to be achieved. They also provide essential inputs to value chains in other sectors but are often not accounted for in terms of efforts to reduce an end-product's emissions. **New research<sup>6,7</sup> also shows that credible pathways for net zero industry in Europe exist, highlighting that a more circular economy as well as the right kinds of policies, investment and innovation will be critical along the way.**

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## Action needed across the board

Decision makers must recognise the need to put in place measures that ensure decarbonisation takes effect across industrial ecosystems and supply chains. Effort is needed therefore to support decarbonisation in the user phase as much as the manufacturing phase, and account for sectors where production or usage is particularly energy intensive. Differing approaches will be required but a fundamental focus on ensuring energy efficiency, circular economy processes and shift away from using fossil fuels will be critically important.

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# Overview

## Industrial Strategy

The new Industrial Strategy sets out a future direction for European Industry and the sorts of measures that should be enacted in support of this strategy. Its focus is on ensuring the competitiveness of European industry in view of digitalisation and achieving climate-neutrality. The strategy is considered an integral part of Europe's Green Deal and builds upon the previous EU Industrial Strategy that dates to 2017.

The Commission outlines a number of critically important enabling conditions for industrial transformation in view of climate neutrality, such as the need to build a more circular economy, the importance of encouraging industrial innovation and the backing of financial support during the transition period. The strategy outlines key principles that should be applied as part of an industrial approach in the coming years and states that the 'energy efficiency first principle' should be the primary focus of industrial efforts to decarbonise. It gives special attention to some breakthrough technologies such as 'clean hydrogen' and energy intensive industries such as steel, chemicals and cement. The Commission commits to taking a more strategic approach to renewable energy and backs further investment in research, deployment and infrastructure in order to help develop new production processes and boost employment.

From a legislative standpoint, the Strategy explicitly refers to revising state aid rules for 'Important Projects of Common European Interest' (IPCEIs) and confirms the Commission goal of having a carbon border adjustment mechanism legislative proposal for 2021, despite lacking much detail on the dynamics of such a scheme vis-à-vis other EU legislation such as the EU ETS.

## Action Plan on the Circular Economy (CEAP)

The Industrial Strategy is complemented by the European Commission's new Action Plan on the Circular Economy which sets out a number of promising new initiatives planned by the Commission over the coming years with the intention of strengthening Europe's industrial base through reducing the material footprint of products and to assisting in achieving climate neutrality.

The action plan includes many positive elements to support the development of circular and low carbon markets. A standout proposal is to have a new sustainable product policy framework in place applicable to intermediate and consumer products and include the product groups of steel, cement and chemicals. The goal here is to develop sustainability principles for different products and to apply an entire lifecycle approach across different value chains.

The CEAP includes plans to strengthen EU rules on green public procurement and to have a review of the Industrial Emissions Directive in order to better ensure circularity in industrial processes. Numerous sectors are covered by the CEAP, and special attention is given to those using the greatest amount of resources and have the highest potential for circularity, including electronics

and ICT, batteries and vehicles, packaging, plastics, textiles, construction, buildings and energy intensive industries. Finally, the Commission will also propose new mandatory requirements for recycled plastic content and waste reduction measures for key products such as packaging, construction materials and vehicles.

## Key elements of the proposals

### Achieving net zero emissions by 2050

In what amounts to a substantial revision to previous industrial masterplans and circular economy initiatives of the European Commission, both the Industrial Strategy and CEAP recognise that industry will need to significantly evolve and adapt itself in order to hit the EU goal of net zero emissions by 2050 at the latest. It is essential now to develop clear pathways for individual sectors in order to build consensus around the sorts of measures that are needed to decarbonise whilst ensuring that EU industries remain competitive. It is also important to recognise the need to align Covid-19 industrial recovery plans with the objectives of the Industrial Strategy and CEAP, including the long-term goal of net zero emissions by 2050 at the latest.

CLG Europe recommendations:

- Achieving net zero emissions by 2050 at the latest should be a key objective of EU and Member State Industrial Policy.
- Sector specific pathways must now be developed and set out the actions needed to decarbonise industry in line with the EU intermediary (revised) 2030 targets and net zero emissions by 2050.
- New strategies proposed by the Commission for steel and chemicals should give direction on how to achieve net zero emissions by 2050 at the latest and address the needs to improve material efficiency, recirculation of materials and use of renewable energy and to clarify the roles for green hydrogen, CCUS and biomass. A strategy for clean cement should also be developed.
- Industrial recovery packages developed at the European and national level in response to Covid-19 must be in alignment with EU climate goals and the objectives of the Industrial Strategy and CEAP.

### Ensuring a circular economy and creating new markets for low carbon materials

Truly circular business models offer great potential to increase demand for both renewable energy sources and recirculated materials. In combination, both the Industrial Strategy and CEAP recognise the importance of changing production processes, consumption patterns and recycling infrastructure and the necessity of putting in place policy measures that target both materials (e.g. steel, cement, plastics) and end products (e.g. cars, buildings, appliances). They also highlight the

need to develop new markets for low carbon and circular products and materials. This demand is indeed fundamental to the viability of decarbonising industry as companies producing low carbon goods need to be assured of their uptake. New markets for low carbon options can be supported by a range of policy tools including the use of public sector procurement rules, standards that support greater transparency on the environmental impact of materials and products and clear incentives such as carbon pricing.

CLG Europe recommendations:

- The Commission should make its new ‘sustainable product policy framework’ a priority legislative initiative and set ambitious environmental design parameters including on the carbon footprint and material efficiency of key industrial materials.
- Measures to help create markets for low carbon and circular steel, cement and chemicals should be prioritised, including the development of new standards, to drive demand at both material and product level.
- Developing performance-based public procurement standards as proposed by the Commission presents a huge opportunity to drive demand towards low embodied carbon products and materials. This could help create new markets and having recognised standards could also influence procurement in the private sector.
- A new strategy for a sustainable built environment should promote circularity principles and support provisions for reductions in both embodied and operational emissions of buildings.
- The expected Commission proposal on the sustainable use of plastics should include mandatory requirements for recycled content and waste reduction measures for key products such as packaging, construction materials and vehicles.
- The expected review of the Industrial Emissions Directive should assess the untapped potential of the legislation to contribute to the circular economy and climate objectives.

## Accelerating clean innovation

Both the Industrial Strategy and the CEAP recognise the importance of innovation in the European economy to drive down emissions and improve circularity. And while many of the tools needed to reduce industrial emissions are already available for deployment, reaching full decarbonisation of industry will require accelerating clean industrial innovation. For example, this is important for the shift from product-based to service-based digital business models where there is the potential for significant savings in CO<sub>2</sub> emissions and resource usage. Well-designed finance mechanisms, including innovation incentives, will be required to turn these expanding activities into mainstream economic models. Specific mechanisms will also be required for decarbonising heavy industry as it is particularly capital intensive, especially where new production methods and machinery are required. This will require investment from both business and governments.

CLG Europe recommendations:

- Facilitating access to public and private sector funds to support the acceleration of clean industrial innovation must be an area of focus of all relevant EU investment tools.

- The EU ETS Innovation fund should support innovative projects that reduce CO<sub>2</sub> emissions in the production of energy intensive products.
- The Commission should revise State aid rules for IPCEIs in order to ensure that Member States can fund large-scale innovation projects to help decarbonise industrial processes.
- Any investment support for carbon capture and use/storage should only be granted for industries where there are few if any alternative measures that can be utilised to reduce CO<sub>2</sub> emissions, such as the cement and chemicals sectors.
- The proposed Clean Hydrogen Alliance should focus its efforts in supporting the deployment of green hydrogen.
- Tools such as the use of carbon pricing and contracts for difference could also be utilised for the purpose of closing the gap between business as usual and new zero carbon solutions, to incentivise investment.
- New EU financial regulation on sustainable finance taxonomy should be fully applied in order to encourage long-term investment alignment with sustainability goals as well as shorter term Covid-19 recovery objectives.
- There is an urgent need for fossil fuel subsidy reform, as this would make a significant contribution to incentivising the use of renewable energy, cleaner fuels and innovative new technologies.
- Further efforts to speed up the digitalisation of EU industry should be supported in order to advance industrial symbiosis and the development of the circular economy.
- The expected update to the European Commission's Skills Agenda, and the launch of a new Pact for Skills, must prioritise the need to invest in upskilling and reskilling of workers whose jobs are at risk from cleaner industrial processes and ensure quality jobs in the circular economy.

## Governance and further needs

The European Commission has proposed that a new Industrial Platform should be set up by September 2020 in order to oversee the implementation of the new Industrial Strategy. This initiative should ensure the following:

- Bring multiple stakeholders together including policy makers at national and European level, business, independent organisations and NGOs, in order to oversee that the objectives of the strategy are being achieved.
- Convene and support interdisciplinary partnerships and collaboration across governments, industry and research institutes.
- Allow for further discussion and analysis on the need to revise EU regulatory frameworks in order to create an enabling environment for innovation.
- Assess the research and development needs regarding the piloting, demonstration, deployment and commercialisation of new solutions and breakthrough technologies in the field of clean innovation.



## Competitiveness

The changes required to decarbonise EU industry while preserving competitiveness will stretch across all sectors of the economy where carbon intensive materials are used in the production, packaging, transport or delivery of goods and services. Despite it being a huge investment and innovation challenge, European industries stand to reap the benefits of improved productivity and simultaneously increase their competitiveness. This can help establish themselves in a strong position internationally as a leader in low carbon innovative and sustainable products and services, energy efficiency and renewable energy.

Equally, there are fears about the future competitiveness of EU industry should investments in cleaner production processes mean producers outside of Europe gain a competitive advantage. Under this scenario, it is clear that measures should be taken to avoid such a loss of competitiveness. As difficult as it would be to develop such a mechanism, a carbon border adjustment (CBA) has been proposed as a solution to this challenge. Here, there are several key factors that need to be considered regarding a possible European approach to developing a CBA:

- Developing a workable solution is highly complex considering its potential scope and relationship with other EU legislation and wider trade policy.
- A measure that imposes a levy on goods imported into the EU is not in itself a measure that offers an additional incentive, beyond those already in place, for manufacturers to decarbonise their operations;
- Measures that can directly incentivise clean innovation, such as standards for low carbon materials/products, can similarly have the desired effect of ensuring a competitive advantage for those industries at risk of carbon leakage.

Considering these issues, it is vitally important therefore that the EU retains the focus of its efforts on decarbonising European industry by way of putting in place measures (such as those outlined in the earlier sections of this paper) that directly incentivise investment into clean industrial processes, infrastructure and the deployment of renewable energy sources.

## Is EU industry committed to tackle climate change?

There are growing number of companies putting in place decarbonisation measures in line with achieving a climate neutral Europe. For instance, the Hybrit joint venture between SSAB, LKAB and Vattenfall is investing in the world's first fossil-free iron ore-based steel production by using fossil-free electricity and hydrogen instead of coke and coal; StoraEnso is investing in renewable and recyclable wood based products which contributes to a circular bioeconomy and reduces the demand for carbon-intensive material; DSM is transitioning towards a low carbon circular economy by investing and innovating in bio-based and recycled-based materials, designing fully recyclable products, and working with value chain partners to recycle DSM end products. ROCKWOOL's approach to circularity and decarbonisation is embodied not only by the energy saving and recyclable insulation material that it manufacturers but also by the dedicated recycling facilities it

offers to contractors and builders; And Interface has been able to ensure that all of their flooring products are carbon neutral and are exploring the use of carbon negative materials in their carpet tile products. Unilever is taking an active role in creating a circular economy for plastic through its 'Less, Better, No' plastic framework, exploring new ways of packaging and pioneering innovations to make more plastic recyclable. Unilever is committed to halve its use of virgin plastic by 2025 and to help collect and process more plastic packaging than it sells. For all these businesses, and many others who are setting Science Based Targets for 2030 and making commitments to carbon neutrality by 2050 at the latest, it is crucial that policy makers take action to support investment and innovation in more sustainable value chains and in turn provide the certainty that is essential for industrial transformation to take effect.

In addition, many European companies are stepping up their support to the climate agenda by backing global initiatives that require companies to shift to renewable energy and become more energy efficient, to invest in ultra-low emissions vehicles and to develop net zero emissions buildings.<sup>8</sup>

## References

- <sup>1</sup> European Commission (2020) *A New Industrial Strategy for Europe*. Retrieved from [https://ec.europa.eu/info/sites/info/files/communication-eu-industrial-strategy-march-2020\\_en.pdf](https://ec.europa.eu/info/sites/info/files/communication-eu-industrial-strategy-march-2020_en.pdf)
- <sup>2</sup> European Commission (2020) *Circular Economy Action Plan*. Retrieved from [https://ec.europa.eu/environment/circular-economy/pdf/new\\_circular\\_economy\\_action\\_plan.pdf](https://ec.europa.eu/environment/circular-economy/pdf/new_circular_economy_action_plan.pdf)
- <sup>3</sup> World Economic Forum (2020) How biodiversity loss is hurting our ability to combat pandemics. Retrieved from <https://www.weforum.org/agenda/2020/03/biodiversity-loss-is-hurting-our-ability-to-prepare-for-pandemics/>
- <sup>4</sup> University of Cambridge Institute for Sustainability Leadership (CISL). (2019). *A new agenda for Europe: Business priorities to deliver a prosperous, climate neutral economy*, Cambridge, UK: The Prince of Wales's Corporate Leaders Group
- <sup>5</sup> University of Cambridge Institute for Sustainability Leadership (CISL). (2019). *Forging a carbon-neutral heavy industry by 2050: How Europe can seize the opportunity*, Cambridge, UK: CLG Europe
- <sup>6</sup> Material Economics (2019). *Industrial Transformation 2050 - Pathways to Net-Zero Emissions from EU Heavy Industry*. Retrieved from <https://www.cisl.cam.ac.uk/resources/low-carbon-transformation-publications/industrial-transformation-2050-pathways-to-net-zero-emissions-from-eu-heavy-industry>
- <sup>7</sup> Energy Transitions Commission (2018) *Mission Possible: Reaching net-zero carbon emissions from harder-to-abate sectors by mid-century*. Retrieved from <http://www.energy-transitions.org/mission-possible>
- <sup>8</sup> We Mean Business (2019) *Delivering the zero-carbon economy through bold climate action*. Retrieved from <https://www.wemeanbusinesscoalition.org/wp-content/uploads/2019/09/WMB-Overview-9-19.pdf>

