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(Internal Market and Industry)
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Presidency discussion paper

Smart solutions for a competitive and climate neutral
Europe

European industry and businesses recognize the urgency of climate
action

The message of the recent IPCC report¹, published in October 2018, is clear. Climate change is a global threat and the world is not moving fast enough to prevent irreversible climate disruption, therefore efforts must be significantly increased to avoid severe consequences.

The Commission proposed in the Communication² 'A Clean Planet for all – A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy (LTS)' a strategy that would allow Europe to become the first major economy to go climate neutral by 2050, and be among the first to achieve net zero greenhouse gas emissions.³

The March 2019 European Council emphasised the importance of the EU submitting an ambitious long-term strategy by 2020 that would strive for climate neutrality in line with the Paris Agreement, while taking into account the Member States' specificities and the competitiveness of European industry. Based on its meeting in March, the European Council will discuss the issue in June 2019. In view of the importance of a globally integrated, sustainable and competitive industrial base, the March 2019 European Council also invited the Commission to present a long-term vision for the EU's industrial future by the end of 2019.

¹ Link to the report: <https://www.ipcc.ch/sr15>

² Link to the Communication released on 28 November 2018:
https://ec.europa.eu/clima/policies/strategies/2050_en

³ The Communication was discussed at the Competitiveness Council meeting in February 2019.

Climate policy developments have been recognized by European industry and businesses. All industrial sectors will have a significant role to play. In October 2019 the High Level Expert Group on Energy-Intensive Industries will release the Industrial Transformation Roadmap that will address LTS and Energy-Intensive Industries' cross-sectoral vision on possible pathways to achieving climate neutrality.

On 29 April 2019, BusinessEurope published its competitive energy and climate strategy. BusinessEurope states, among other things, that it supports the EU's climate neutrality ambitions, and that these ambitions must be closely connected to Europe's agenda on competitiveness. In the second High-Level Forum of the Clean Energy Industrial Forum on Renewables, convened in March 2019, the leaders endorsed the Commission proposal for a climate neutral economy by 2050.

The transition towards climate neutrality is a global business opportunity for Europe

The transition towards a climate neutral Europe will impact all value chains and create new business opportunities for European industry and businesses by providing low-carbon solutions. According to LTS for example, new clean energy and bio-based, circular and digital solutions, among others, are needed to decarbonize the economy. For instance, the European renewable energy industry is currently a global leader in key energy technologies and services.

The Commission's vision estimates that annual investment needs in the energy system will rise from about 2 % of GDP currently to 2.8 % in the period 2031-2050. Similarly, the IPCC estimates that investment needs in the energy system between 2016 and 2035 will amount to some 2.5 % of global GDP, or around USD 2.4 trillion per annum. These investments represent examples of global business opportunities for European industry and businesses.

Potential game changers in European economies on the path towards climate neutrality

The digital economy is renewing European and global value chains and networks. It is one of the game changers of the European economies. Digital solutions can offer various opportunities to improve competitiveness and to improve the energy and material efficiency of industrial processes and value chains, thus helping to reduce greenhouse gas emissions. Big data and artificial intelligence will aid decision making, thereby facilitating the resolution of complex challenges. On the other hand, the evolving digital economy may also lead to an increase in energy consumption, as more electricity will be needed for both digital infrastructure and digital devices⁴.

⁴ Sources: OECD (2019): How's Life in the Digital Age?: Opportunities and Risks of the Digital Transformation for People's Well-being, Chapter 2: Evidence on opportunities and risks for well-being in the digital age and IEA (2017): Digitalization and Energy

Energy efficiency and renewable sources will help reduce these negative side effects.

Breakthrough innovations will be critical in decarbonizing European economies and in taking Europe's competitiveness to the next level. Revolutionary innovations may pop up in all sectors of the economy to help further emissions cuts as well as to create new business opportunities. Digital technologies and concepts such as artificial intelligence, the Internet of Things and blockchain, as well as materials science and biotechnologies, are examples of areas in which breakthrough innovations could be expected to happen.

Power-to-X, meaning electricity for anything, is a set of means to mitigate climate change by using clean electricity to reduce greenhouse gas emissions in various sectors. Some Power-to-X examples include e.g. electric vehicles, the production of e-fuels such as hydrogen for industry or even the production of e-proteins⁵. Power-to-X can lead to profound changes in energy markets as these technologies become attractive in the context of massive investment in carbon-free electricity production capacity. According to LTS the possible rise in electricity supply can lead to an increase in primary energy consumption compared to the baseline, as the production of Power-to-X technologies is energy intensive.

A holistic approach to the new EU growth agenda

LTS foresees that industrial transformation towards climate neutrality will require an integrated and systemic approach. For example research, internal markets, industry, energy, climate and circular economy policies have to be aligned to be successful in the transition towards climate neutrality while improving the competitiveness of European industry and businesses. These vast transformational investments require action at regional, national and EU level and can benefit from the coordination provided by the National Energy and Climate Plans.

The EU needs massive and coordinated efforts in research and innovation for the next two decades. In this context, the EU's research and innovation strategy should be geared towards low-carbon solutions that can be deployed by 2050. The Commission has pointed to the National Energy and Climate Plans under the Energy Union Governance Regulation as a key tool for ensuring an integrated approach towards Research, Innovation and Competitiveness in energy and climate action. The European Strategic Energy Technology Plan (SET Plan)⁶, which aims to accelerate the development and deployment of low-carbon technologies, should play a key role in R&I coordination in Europe.

Climate and competitiveness will be at the heart of Horizon Europe, the EU's research and innovation programme for 2021-2027. In addition to

⁵ Link to results of NeoCarbon research project: https://www.lut.fi/web/en/news/-/asset_publisher/Igh4SAywhcPu/content/protein-produced-from-electricity-to-alleviate-world-hunger

⁶ For more information: <https://ec.europa.eu/energy/en/topics/technology-and-innovation/strategic-energy-technology-plan>

Horizon Europe and various other EU funds, such as the Innovation Fund and Cohesion Funds, national and regional financing instruments are also important in enabling investment in low-carbon solutions. Public innovation funding can facilitate the creation and operation of innovation ecosystems in the areas such as the circular bioeconomy, smart energy and batteries. Innovation ecosystems are vehicles for the creation of new innovations and the enhancement of knowledge dissemination through the facilitation of cooperation between companies, research organizations, end customers and other stakeholders.

The Single Market can help in supporting the transformation of European industry and businesses through a well-functioning home market for raw materials, products and services. Public procurement, standard-setting and product-labelling are examples of effective policy measures. Also, cross-border infrastructure and research activities are important in facilitating favourable conditions for trade and investments in the Single Market. For example, a wind turbine manufactured in Europe consists of products and services provided by companies from 14 different European countries.⁷ The example highlights the critical role of the Single Market in enabling cost-efficient investments in low-carbon solutions.

Global climate action is crucial, not only to the climate itself but also as a driver for change that will benefit society and the planet without losing the competitive edge of European industry. It is important for Europe to work closely with other economies globally to achieve the objectives of the Paris Agreement, while at the same time cost-effectively promoting the industrial transformation towards climate neutral, circular and sustainable industry. Also, carbon pricing mechanisms may be important tools to enable the transition towards climate neutrality in the EU and globally.

Next steps towards a competitive and climate neutral Europe

The Energy Union Governance Regulation provides a cross-sectoral policy framework to address the low carbon transition, and creates investment certainty by presenting clarity on the way ahead. Member States have communicated their draft National Energy and Climate Plans (NECPs): the Plans, as well as the Commission's analysis and the ways in which the instrument can best be used, will be discussed in autumn 2019. The EU should also adopt and submit an ambitious long-term strategy by early 2020 to the United Nations Framework Convention on Climate Change (UNFCCC) as requested under the Paris Agreement. EU Member States are also required to develop national long-term strategies by 1 January 2020.

EU commercial policies and international efforts made to price greenhouse gas emissions can help to ensure an undistorted, international level playing field in this rapidly growing market. A full value chain approach is required to tackle barriers to trade and investment. This includes ensuring

⁷ Communication from the Commission: The Single Market in a changing world: a unique asset in need of renewed political commitment (2018). Link to the Communication: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018DC0772>

sustainable access to raw materials needed for the manufacture of technology solutions, considering a reduction of tariffs and non-tariff barriers on goods and related services relevant for the clean energy transition in a bilateral and multilateral context, and ensuring non-discriminatory and reliable access to the energy markets of third countries and energy-related public procurement markets.

European research and other financing instruments are key to enabling and incentivizing the private sector investment needed in both projects and infrastructure for the European energy transition. Strengthened support for technological development and low-carbon innovation is a priority in order to maintain European competitiveness, both for incremental innovation as well as radical new solutions. Furthermore, mainstreaming climate-related financing across all sectors is crucial.

Aim of the discussion and questions

The session will focus on the nexus between competitiveness and climate actions. The discussion could focus on effective policy actions to achieve both competitiveness and climate policy objectives as well as exploring concrete solutions and business opportunities on the path towards climate neutrality.

Questions for discussion (interventions max 3 minutes):

- Which are the most effective policy actions to encourage investment in low-carbon solutions and to improve European competitiveness on the path towards climate neutrality?
- How can European industry and businesses take advantage of the transition towards climate neutrality in the global context?