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NOTE

From:	General Secretariat of the Council
To:	Permanent Representatives Committee/Council
No. Cion doc.:	15011/18
Subject:	Clean Planet for all - A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy – Policy debate

1. On 28 November 2018, the Commission adopted the Communication 'A Clean Planet for all: A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy'.

2. At the meeting of the Council (Environment) on 5 March 2019, ministers will be invited to hold a policy debate on the Communication. The Presidency has prepared a background paper (in Annex) and questions to help structure the discussion.

3. The Permanent Representatives Committee is invited to take note of the Presidency background paper, as set out in the Annex to this note, and to forward it to the Council for the above-mentioned exchange of views.

ANNEX

Clean Planet for all: Strategic long-term vision for a climate-neutral economy

- Presidency background note and questions for ministers -

Introduction

Parties to the Paris Agreement are invited to communicate their mid-century, long-term low greenhouse gas emission development strategies to the United Nations Framework Convention on Climate Change (UNFCCC) by 2020. In that context, the European Council invited the Commission on 22 March 2018 to present, by the first quarter of 2019, a proposal for a strategy for long-term EU greenhouse gas emission reductions in accordance with the Paris Agreement.

On 28 November 2018, the Commission adopted the Communication 'A Clean Planet for all: A European strategic long-term vision for a prosperous, modern, competitive and climate-neutral economy'. The Communication, which is accompanied by an in-depth analysis, does not propose new greenhouse gas emission reduction targets for the EU but presents eight different scenarios which would achieve net reductions of greenhouse gas emissions ranging between 80 % and 100 % by 2050. The Communication underlines that the scale of the economic and societal transformations required to achieve a transition to net-zero greenhouse gas emissions will require efforts from all sectors of the economy, in particular energy, buildings, transport, industry, land-use and agriculture. In addition, the Communication draws attention to the role of finance and investments, research and innovation, the employment and social aspects of the transition as well as international cooperation.

The Communication is intended to launch a comprehensive debate involving decision-makers, stakeholders and the general public. It was presented to the Council on 19 December 2018 (Energy), 20 December 2018 (Environment) and 18 February 2019 (Competitiveness). The presentations were followed by an initial exchange of views between ministers. Discussions on the Communication and its accompanying in-depth analysis are continuing at Working Party level. During the Romanian Presidency, all relevant Council formations will hold extensive policy debates on the contribution of their respective policy areas to the overall vision in order to provide input to and help prepare discussions at the level of the European Council. This should enable the EU to submit to the UNFCCC, by 2020, a long-term strategy which will be consistent with the objectives and long-term goals of the Paris Agreement.

The preparation of the EU's long-term strategy should take into account the integrated national energy and climate plans of Member States, which in turn have to be consistent with their long-term strategies.

Energy

The eight scenarios assessed in the Commission's communication are based on either existing or emerging solutions. All scenarios imply that by mid-century the energy system will move away from fossil fuels towards large-scale electrification driven by the deployment of renewables. This would significantly improve security of supply, reduce energy import dependence and foster domestic jobs. Considerable progress has already been made in transforming Europe’s electricity production. The cost of renewable energy has already significantly decreased in the last ten years, in particular in the case of solar and wind, and over a half of Europe's electricity supply is today free from greenhouse gas emissions. According to the Commission, by 2050 more than 80% of electricity will come from renewable energy sources, and the share of nuclear power will be around 15%. The transition towards a largely decentralised power system based on renewables will require a smarter and flexible system, increased interconnectivity, improved large-scale energy storage and demand-side response and management through digitalisation. An adequate and smart infrastructure is needed to ensure optimal interconnections and sectoral integration across Europe, including increased synergies between transport and energy systems.

Energy efficiency will play a central role in reducing emissions from industrial processes and buildings. Higher renovation rates, fuel switching, the use of highly efficient products and appliances, and improved materials for insulation will contribute to improvements in energy efficiency. Further energy efficiency measures include digitalisation and home automation, labelling and standards. Higher renovation rates require the availability of the necessary financial instruments and workforce, and the transformation must also be affordable in order to ensure consumer engagement.

Transport

Transport is today responsible for around a quarter of greenhouse gas emissions in the EU. The transition to clean mobility requires the contribution of all transport modes and a system-based approach including low and zero emission vehicles, carbon-free, decentralised and digitalised power, more efficient and sustainable batteries, connectivity and autonomous driving. Alternative fuels will be important for transport modes where electrification is more difficult, such as aviation, long-distance shipping and heavy-duty vehicles. Further research and development are needed into the production of alternative fuels as well as vehicle technologies such as batteries, fuel cells and hydrogen gas engines. Infrastructure and spatial planning should be improved to optimise transport networks, including public transport, and to encourage cycling and walking, and business travel may be reduced by the use of digital technologies. Behavioural changes will also be needed.

Industry and the circular economy

European industry is already today one of the most efficient globally. In order for it to remain so, competitive resource-efficient and circular economy will need to be developed. Energy needs, materials input and process emissions can still be further reduced in the production of industrial goods, notably thanks to increasing re-use and recycling of materials. New materials, digitalisation and consumer choices will also play a role. Many industrial process-related emissions will nevertheless be very difficult to eliminate. Some options to mitigate them nonetheless exist, such as CCS and CCU, or the use of renewable hydrogen and sustainable biomass as feedstock for a number of industrial processes. However, for CCS to play an important role in the future, the necessary research, innovation and demonstration needs to be accelerated, and issues regarding its public acceptance have to be addressed. Finally, a strengthened EU trade policy will have a role in ensuring a sustainable and secure supply of rare earths and other critical materials to the EU.

Enhancement of sinks and creation of a bio-economy

Non-CO_2 greenhouse gas emissions from agriculture can be reduced through efficient and sustainable production methods. There is also a considerable potential in agricultural land to sequester and store carbon. Adapting certain agricultural activities in organic soils and restoring peatlands and wetlands can drastically reduce emissions. Sustainable biomass has an important role to play as it can supply direct heat, be transformed into biofuels and biogas and, when cleaned, can be transported through the gas grid substituting natural gas. A net-zero emissions economy will require increasing amounts of biomass compared to today's consumption. Increased biomass production will need to come from a combination of sources while ensuring natural sinks in the EU are maintained or enhanced. Afforestation and restoration of degraded forest lands and other ecosystems can further increase absorption of CO_2 while also benefiting biodiversity, soils and water resources and increase biomass availability over time.

Enabling framework for challenges and opportunities

The management of the transition will require a scaled-up policy effort, and the transformation of the economy will create considerable additional investment needs. Technological innovations will need to be scaled up in the energy, buildings, transport, industry and agriculture sectors, and can be accelerated by breakthrough technologies. Research, development and demonstration will significantly reduce the costs of breakthrough technologies but an enabling framework is needed to support them, as well as to scale up private investments, provide the right signals to the markets, and ensure a just transition. Private business and households will be responsible for the vast majority of these investments. To foster such investment, it is crucial for the EU and the Member States to offer clear, long-term signals to guide investors, to avoid stranded assets, to raise sustainable finance and to direct it to clean innovation efforts. Some regions in Europe are more dependent than others on carbon-intensive industries, and some regions are better connected to energy infrastructure or transport networks than others. While many sectors, cities and regions face undeniable challenges, the transition to low greenhouse gas emission and climate resilient economies has also already created and has the potential to create additional employment opportunities. However, policies will be needed to protect workers in the sectors where there will be fewer jobs in the future.

Questions for ministers:

Against this background, and with a view to providing guidance for further work, ministers are invited to hold a policy debate on the basis of the following questions:

1. Based on your evaluation/analysis at national level of the efforts needed to achieve the objectives of the Paris Agreement, which elements of the long-term vision are the most important with regard to the challenges and / or opportunities of the transition to a climate-neutral economy in a socially fair and cost-efficient manner. What kind of policies or tools at EU level could help to address the specific challenges?

2. The investments required to achieve the transition will mostly need to come from the private sector. What kind of enabling framework is needed to stimulate the necessary investments, among others in new technologies through research, innovation and development, as well as in education and training, including reskilling and upskilling of the workforce?