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**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

Accelerating Europe's transition to a low-carbon economy

**Communication accompanying measures under the Energy Union Framework Strategy:
legislative proposal on binding annual greenhouse gas emissions reductions by Member
States from 2021 to 2030, legislative proposal on the inclusion of greenhouse gas
emissions and removals from land use, land use change and forestry into the 2030
climate and energy framework and communication on a European Strategy for low-
emission mobility**

1. Introduction

The global transition to a low-carbon and circular economy has begun, given fresh impetus by the Paris Agreement on climate change¹ and the 2030 Agenda on Sustainable Development. This transition is necessary in order to provide jobs, growth and investment opportunities for present and future generations of Europeans, while mitigating dangerous climate change. If the EU does not maintain and exploit its first mover advantage when fostering renewable energy, energy efficiency and competing on the development of other low carbon technology markets globally, other regions will. Europe's economic model is expected to change. It is our shared responsibility to ensure that the transition is fair and based on solidarity, so that none are left behind. The Energy Union framework strategy² contributes to this goal.

The package of measures presented by the Commission today helps Europe to prepare for the future and to stay competitive. It is primarily addressed to Member States, since they will be in the forefront of deciding how to implement measures to meet the agreed greenhouse gas emission target for 2030³.

But Member States cannot do it alone. The mobilisation in the run up to the Paris climate conference showed how important non-state actors are for delivering change. The EU also expects action from its businesses, farmers, researchers, investors, educators and social partners, amongst others. At the same time, the EU also has the responsibility to boost their action by providing EU-wide measures and enabling environment. It supports action by its cities, in which 80% of us live. They are among the most dynamic and innovative actors in implementing a low-carbon, circular economy, often exceeding national levels of ambition. Rural communities are equally important, as they play a crucial role in providing sustainable natural resources and protecting the environment for future generations.

The EU is doing its utmost to maintain the positive momentum for climate action at the global level. No land is an island when faced with the threat of catastrophic climate change. That is why, at the highest political level, G7 leaders have committed to accelerate the transition to an energy system that enables decarbonisation of the global economy, as well as to set a deadline for ending most fossil fuel subsidies, pledging to end government support for coal, gas and oil by the end of 2025. The EU's cities will play a pivotal role in a new coalition of cities around the world, which could be a further opportunity to engage internationally in continuing the fight against climate change at local level. The growing sense of urgency to address the link between climate change, and fragility and security was reaffirmed in this year's EU climate diplomacy action plan⁴.

The EU has all the potential to turn the climate change challenge into an opportunity. In this global context, Europe is a leader in developing innovative low-carbon technologies and

¹ COM (2016) 110 *The Road from Paris: assessing the implications of the Paris Agreement*.

² COM (2015) 80 A *Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy*.

³ In October 2014, the EU Heads of State and Government agreed the 2030 policy framework for climate and energy. The framework sets out the EU commitment to a binding target of at least a 40% domestic reduction in economy-wide greenhouse gas emissions by 2030 compared to 1990.

⁴ European climate diplomacy after COP21 – Council conclusions of 15 February 2016.

services, not only in the energy sector but also in industry, buildings and transport. It should maintain this leadership. We have to continue to equip Europeans with the right skills for the low-carbon economy, invest in our children's future and help industry to adjust to changing needs. Europe has promised ambitious action, and it will deliver what it has promised.

2. Guiding principles of a regulatory framework for a low-carbon transition in all sectors of the economy

The EU agreed in October 2014 a clear commitment: a binding, economy-wide emissions reduction target of at least 40% by 2030, compared to 1990 levels. This commitment is in line with a cost-effective pathway to reach the EU's long-term climate objective and became the basis for EU's international commitment under the Paris Agreement on climate change and will be delivered by all Member States collectively.

To start implementing that commitment, in July 2015, the Commission presented a proposal to reform the EU Emissions Trading System to make it fit for purpose and drive investments after 2020 in the industrial and power sectors⁵. The European Parliament and Member State governments in the Council should do their utmost to adopt this proposal quickly. The present package of measures addresses the other main elements of the economy that will contribute to climate action: the sectors of buildings, transport, waste, agriculture⁶, as well as land-use and forestry.

Building on the guiding principles for EU climate action so far, the new regulatory framework is based on the key principles of fairness, solidarity, flexibility and environmental integrity.

To ensure fairness and solidarity, embedded in the climate and energy framework for 2030 as agreed by the European Council, the Commission proposes differentiated national emission reduction targets for 2030 that take account of the gross domestic product of each Member State to reflect relative wealth. The levels of the targets for individual richer Member States are further adapted among themselves to take into account cost-effectiveness.

Furthermore, the proposal creates a flexible system in which Member States can reduce emissions jointly, across a number of sectors and over time, reflecting also the different structure of Member States' economies. It will allow trade in emission allocations between Member States or the development of projects to reduce emissions in other Member States. This will facilitate investments flows across the EU towards where they are most needed to modernise the economy and where they will deliver the highest benefits at the lowest costs⁷.

This is the first time that the land-use and forestry sector is included in the EU energy and climate framework. The Commission proposes a careful balance between more incentives to capture carbon and reduce emissions from soil and forests and the need to maintain the environmental integrity of the EU climate framework, so as to incentivise emission reductions

⁵ The EU 2030 target requires reductions of -43% compared to 2005 in these sectors.

⁶ The EU 2030 target requires reductions of -30% compared to 2005 in these sectors.

⁷ To further facilitate compliance, Member States that face proportionately higher costs to meet their target can opt to transfer some allowances under the Emission Trading System to offset emissions in the other economic sectors.

in the buildings, transport and agriculture sectors. Therefore flexibility towards other sectors will be limited.

The proposed Regulation for these sectors provides more robust accounting rules for land, land-use and forestry. As forest management is the main source of biomass for energy and wood production, more robust accounting rules for forest management will provide a solid basis for Europe's renewables policy and the further development the bio-economy after 2020.

3. Fostering the enabling environment for low-carbon transition in the EU

Building on this regulatory framework, it is up to the Member States to design measures that are most appropriate to reap the benefits of the shift to a low-carbon economy and achieve their targets. The EU will support the Member States with a number of tools and enabling measures.

3.1. The Energy Union Strategy and other sector-specific initiatives

Given the importance of transport in the EU emissions, the Commission is presenting a strategy on low-emission mobility which identifies the key levers in the field of transport, including EU-wide measures on low and zero-emission vehicles and alternative low-emissions fuels. The Strategy also underlines the need to make the most of the synergies between the transport and energy systems.

As regards buildings, the Commission is reviewing the existing EU-framework for energy efficiency and will present proposals later this year, including on how to attract financing into buildings renovation. The Commission will also finalise this year a voluntary industry-wide recycling protocol for construction and demolition waste. Given the more limited scope for emissions reductions in agriculture and land-use sectors, the land-use and forestry proposal will create additional incentives for carbon sequestration in these related activities. Moreover, the reformed Common Agricultural Policy provides different instruments and measures in its two pillars to promote climate action. The review of EU-wide policy addressing the use of fertilisers is expected to contribute to a reduction of emissions from mined and synthetic fertilisers. After agriculture, the waste sector is currently the second most important sector emitting non-carbon dioxide emissions. The Waste Management Framework Directive and in particular the Landfill Directive, for which the Commission proposed revisions last year, are expected to contribute to a significant reduction of emissions from waste.

Member States can only reap the benefits of these EU-wide measures if they implement and enforce them properly.

3.2. Cross-cutting tools and drivers

The Energy Union priority, with all its dimensions, provides a broader framework within which the EU can provide the right enabling environment for the energy transition. Apart from that there are a number of other enabling factors to support such transition across all sectors of the economy.

3.2.1. Circular economy

The circular economy has a role to play in the sectors covered by the package and beyond. There is a direct physical link between the quantity of raw material used, the energy required and greenhouse gas emissions. The EU has managed to decouple its economic growth from the growth in carbon dioxide emissions, but so far have not yet managed to do the same for material use and resource efficiency.

Last year, therefore, the Commission presented an ambitious Circular Economy Package⁸ to address this challenge. The proposed actions will contribute to "closing the loop" of product lifecycles through greater recycling and re-use, and extract the maximum value and use from all raw materials, products and waste.

3.2.2. Innovation for competitiveness

To seize the opportunities created by innovation as a key enabler in the transition to a low-carbon economy and maximize the impact of every Euro invested, the Commission intends to present an integrated Energy Union strategy for research, innovation and competitiveness later this year. Concrete actions under this new strategy should directly support the achievement of Europe's climate and energy goals, and contribute to the modernisation and competitiveness of the EU economy by supporting the EU's leadership in clean technologies.

Europe is still the world's largest source of financing for energy-related research and development (at EUR 3.9 billion in 2014, amounting to 36% of the total) and leads on the number of patent applications for high-value climate-change mitigation technologies, with a 40 per cent share of the total. At the same time, some high-value potential remains untapped, notably in clean-energy technologies and zero-emission vehicles. In other areas, including renewable energy technologies, the EU has begun to lose ground to its competitors. More importantly, and cutting across specific technologies and innovation areas, Europe needs to improve when it comes to bringing its innovations to market and making them commercially successful.

3.2.3. Shifting and scaling up investment

Shifting and rapidly scaling up private investment is essential to support the transition to a low emission and climate resilient economy, and for avoiding the "lock-in" of high emissions infrastructure and assets.

In the EU, efforts have already started to align private investments with climate and resource-efficiency objectives both through policies and by strategic public investments.

The EU Emissions Trading System puts a price on carbon. For sectors not covered by the EU Emissions Trading System, Member States' taxation policies are also relevant to set the right incentives.

⁸ COM (2015) 614 *Closing the loop - An EU action plan for the Circular Economy*.

The Capital Markets Union initiative⁹ addresses the importance of long-term and sustainable investment to maintain and extend EU competitiveness and encourage the shift to a low-carbon and resource-efficient economy. The recent emergence of green bonds can also help direct capital flows towards low-carbon investments.

There is more to do. The EU will continue to deepen the single market and work on removing barriers to investment.

The Commission is actively working to ensure that the current EU budget spending is aligned with the climate objectives. The political commitment to ensure that at least 20% of the Multiannual Financial Framework is explicitly climate related is delivering results. In this spirit, the Commission has recently joined the Mission Innovation Initiative, whose members have committed to double their public funding to clean energy research and development within five years by 2020.

The EU financial instruments are also making a significant contribution to EU climate action, as demonstrated by the European Fund for Strategic Investments. The Fund is firmly on track to deliver on mobilising at least EUR 315 billion in additional investment in the real economy by mid-2018¹⁰. Over 50% of the investments approved so far are climate relevant. Co-investment in projects under the European Fund for Strategic Investments can take place either at project level or at the level of an Investment Platform. Investment platforms can help finance small projects and bundle funds from different sources to enable diversified investments with a geographic or thematic focus. They can also render small or local investment opportunities attractive to new investor groups, for example pension funds or overseas institutional investors. The Commission is exploring ways to blend and combine the resources available under other EU programmes, as for example the Connecting Europe Facility or Horizon 2020 to unlock additional investments, in particular through investment platforms, for example in the fields of energy efficiency, smart urban mobility, and innovative technologies.

The reformed EU Cohesion policy also supports low-carbon transition and its projects will result in benefits for the post-2020 period. It supports measures in energy efficiency in public and residential buildings (EUR 13.3 billion) and in enterprises (EUR 3.4 billion, with a focus on SMEs), in the move towards an energy-efficient, low-emissions transport sector (EUR 39.7 billion for sustainable urban mobility and low-carbon transport modes such as rail, seaports and inland waterways). In addition, EUR 8 billion are allocated for risk prevention and management, including 6.4 billion for climate-related risks. A total of EUR 115 billion of the budget for the reformed Common Agricultural Policy supports climate action through improved land management and targeted investments¹¹.

⁹ See also *Capital Markets Union: First Status Report*, SWD (2016) 147 final.

¹⁰ COM (2016) 359 *Taking Stock of the Investment Plan for Europe and next steps* (state of play on 1 June 2016)

¹¹ Under the Rural Development pillar of the policy, EUR 7.7 billion are earmarked for projects targeting carbon sequestration and storage in soils, the supply and use of sustainable renewable energy and climate smart investments. Another EUR 43.7 billion are earmarked actions to improve ecosystems which also have an effect on the carbon footprint of agriculture and forestry.

In order to support investments in innovation, such as carbon capture, renewable energy and the uptake of new breakthrough technologies in industry, the Commission's proposal for a revision of the Emissions Trading System foresees 450 million emission allowances to be reserved for this purpose.

3.2.4. Fair social transition and new skills

The low-carbon transition is expected to reduce occupations in traditional markets (related to fossil fuels, in particular carbon-intensive industries), while new jobs (related to renewables, energy efficiency and electrification of vehicle transport) will be created. That means also the need to anticipate and mitigate the societal impact of the transition in specific regions and socio-economic sectors, including through the European Structural and Investment Funds.

Since skills will be the key pathway to employability and prosperity, the Commission has adopted a new comprehensive Skills Agenda for Europe¹². To help tackle skills challenges, the Commission is launching actions, which will make skills more visible and improve their recognition at local, national and EU levels, from schools and universities to the labour market. Among others, the agenda addresses re-skilling and up-skilling and sets a "Blueprint for Sectoral Cooperation on Skills" to improve skills intelligence and address skills shortages in specific economic sectors including green technologies.

3.2.5. Trade and export opportunities

Increased trade flows are expected to help the rapid spread of green goods, services and technologies around the world and the shift to a low-carbon economy. The EU is a world leader in exports and imports of environmental goods. In 2013, EU exports of the green listed products amounted to EUR 146 billion (around 8% of the EU's total) and imports to EUR 70 billion. European companies should aim to continue developing and exporting their innovation ingenuity and know-how.

As a member of the World Trade Organisation, the EU actively promotes liberalisation of goods and services, which can deliver environmental benefit. Together, with six other members of the World Trade Organisation, it has been working closely together with the aim of concluding an ambitious environmental goods agreement with all participants ahead of when G20 leaders meet in China later this year for the G20 Summit. Also in its bilateral trade agreements, the EU pursues early liberalisation of environmental goods and services and facilitation of trade and investment in renewable energy generation, contributing to climate policy goals.

4. Conclusions

Europe's transition to the low-carbon economy needs to accelerate. The EU needs more jobs and growth and more investment and this agenda has the potential to deliver them and

¹² COM (2016) 381 *A New Skills Agenda for Europe: Working together to strengthen human capital, employability and competitiveness.*

modernise Europe's economy. In the long-term, this will profoundly change our economic landscape.

The climate-related legislative proposals attached to this communication and last year's proposal to reform of the EU Emission Trading System need to be addressed as a priority by the Council and the Parliament.

The Commission will immediately start or accelerate better regulation processes (including public consultations and impact assessments) to turn the Action Plan on low-emission mobility into a set of efficient and proportionate measures without delay. By the end of the year, the Commission will also present the remaining initiatives to complete the delivery of the EU's Energy Union Strategy.

Member States have already started to prepare their post-2020 energy and climate strategies. This set of initiatives provides them with the necessary clarity and tools, also allowing them to proceed with the domestic ratification process of the Paris agreement in climate change. Member States should make the maximum use of the EU's enabling environment to make the transition to low-carbon economy as smooth and fair as possible.